# TDAC

# RESULTS OF THE
# TDAC FIRST USER WORKSHOP

## (MARCH 19 & 20, 1986)

## MAY 1986

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## DEPARTMENT OF DEFENSE
## TRAINING DATA AND ANALYSIS CENTER

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The DoD Training and Performance Data Center (TPDC) held its first user workshop to explore five topic areas: Training Technology, Reserve Component Training, Simulators & Training Devices, Training Costs and Ranges and Training Areas. This report describes what transpired during the workshop, including the plenary sessions and individual workshop panel sessions. Details are presented concerning the issues discussed in each panel as well as findings and conclusions.

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# EXECUTIVE SUMMARY

The Defense Training Data and Analysis Center (TDAC) was established in August 1984 to address specific problems identified by the 1982 Defense Science Board Summer Study on Training and Training Technology. TDAC is the DoD focal point and central repository for defense training information; its mission is to collect, store and analyze available training information in order to respond to specific requests from the DoD manpower and training community. TDAC's initial taskings, approved in July 1985, included 47 specific projects in 16 broad topic areas.

On March 19th and 20th, 1986, TDAC held a non-attribution, working level user workshop to provide an opportunity for representatives of the DoD training community to familiarize themselves with current projects and discuss their needs and requirements for TDAC support both now and in the future. Approximately 100 military and civilian training officials, representing more than 40 different Service and DoD organizations, participated in the workshop.

The workshop was opened with a plenary session during which TDAC's organization and current efforts were described, along with the specific objectives of the workshop. Attendees then participated in any of five technical panels on Training Technology, Reserve Component Training, Simulators & Training Devices, Training Costs and Ranges & Training Areas.

The most significant result of the workshop was a growing awareness on the part of the attendees of the potential benefits which could be derived from TDAC's data bases and analytical support capabilities. Numerous suggestions were made concerning possible roles that TDAC might play in support of the defense training community; e.g., act as DoD focal point for the exchange of information on training technology applications, assist in the standardization of data structures and reporting procedures, host additional workshops to maintain linkages with the user community. Chief among the concerns expressed by attendees was the importance of establishing adequate safeguards against unauthorized access to data as well as against misuse and misinterpretation of data.
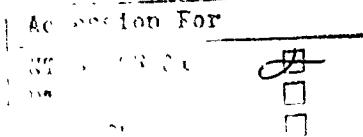
Overall, the workshop helped TDAC to improve the utility of current efforts and products, gain a better understanding of user needs and concerns, and improve the alignment between user requirements and future projects.

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## TABLE OF CONTENTS

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iii

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# INTRODUCTION

On March 19th and 20th 1986, the Defense Training Data and Analysis Center (TDAC) hosted a Users Workshops to provide a forum for the exchange of information between TDAC and representatives of the DOD training community. Workshop participants consisted of users and potential users of TDAC data bases and other support capabilities. The workshop focused on those technical areas in which TDAC's progress warranted review by users and those areas where it was believed that users' views could help to shape future efforts.

Holding a user workshop was a natural follow-up to the process of identifying and obtaining approval for TDAC's initial taskings, which include 47 specific projects in 16 broad topic areas. User workshops are considered to be an integral part of the overall and continuing process to identify the most important and highest priority issues for TDAC emphasis.

The primary objectives of the workshop were to provide the DOD training community an opportunity to become acquainted with TDAC, review current TDAC projects and discuss needs or requirements related to training data and analysis both now and in the future. To accomplish these objectives, the workshop was opened with a plenary session to familiarize attendees with TDAC's history, mission and scope of current projects. Following the overview, goals and objectives for each workshop panel were presented (see attachments A and B).

After the initial general session, attendees participated in any of five technical panels on Training Technology, Reserve Component Training, Simulators and Training Devices, Training Costs, and Training Ranges and Spaces (see attachment C). Each of the technical panels consisted of two parts, the first being a variety of TDAC and/or Service representative speakers discussing specific projects or topics, and the second part being an open forum discussion.

Approximately 100 military and civilian training officials representing over 40 separate organizations throughout DOD participated in the workshop (see attachment D). The majority of the attendees were from the Army and the Air Force, although the Navy, the Marine Corps, OSD and JCS were also represented.

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PANEL CHAIR SUMMARY REPORTS

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SIMULATORS AND TRAINING DEVICES

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# SIMULATORS AND TRAINING DEVICES

I. __INTRODUCTION__.  The purpose of the Simulator and Training Device panel was to present an overview of the S/TS Division's plans and progress in Topic Area 6 of the TDAC Initial Tasking Summary, to become more familiar with available data sources and service data needs, and to elicit discussion and comment from potential TDAC users.  The primary S/TS projects discussed were the Simulator and Training Device Inventory and Front End Analysis Data Bases, and the "Footprint" Manpower Personnel and Training (MPT) Study.  This goal was accomplished by presenting a variety of TDAC and Service representative speakers with diverse interests in the Simulator and Training Device fields.  Of the 47 individuals invited to the workshop, 27 were able to attend.  No Navy personnel were in attendance.  Many individuals who were uncommited to particular workshops, spent a majority of their time in this session.

II. __DISCUSSION__.  Steve Mckee (TDAC), the panel chairman, initiated the proceedings by presenting the Workshop agenda and ground rules.  This set the tone for the direct and lively interchange of dialog which followed.

Col Lee Ransom (TDAC), gave an overview of Simulator and Training Device Inventory, and Front-End-Analysis Data Base projects currently under development in the S/TS Division. This included a general description of the Sonar and Aviation data base development projects as well as the relationship of these efforts to other data base development projects at TDAC.  He concluded by stressing the importance of the workshop in identifying better ways to meet the needs of the training community.

Jim Henris (TDAC) presented a detailed brief of the Inventory and Front-End-Analysis data base projects including a conceptual model of the future S/TS data base, and the evolving Data Element Dictionary.  The plan to include a training effectiveness file in the future design of the S/TS data base generated some discussion concerning the difficulty of measuring training effectiveness and its relevance in terms of operational effectiveness.  There was a general consensus that despite the difficulty, the simulator and training device area would be an appropriate place to begin accumulating training effectiveness data, because these devices permit standardized methods of providing training and measuring student performance.

A viewgraph depicting examples of existing data bases, from which TDAC plans to extract data, raised questions regarding risk versus benefit to the services of providing TDAC with this data.  Some attendees believed that the services were presently capable of maintaining and providing their own data.  Some attendees felt that cross service utilization of data was useful only where comparable weapon systems exist.  There was interest in accessing training data on comparable foreign weapon system training

devices where there did not appear to be commonality among U.S. systems; for example, U.S. Army tank-related training versus similar foreign training activity. There was also a concern that the TDAC Modus Operandi does not eliminate the potential for access of service data from TDAC via the Freedom of Information Act.

A discussion of acquisition related data elicited comments regarding TDAC's role as an OSD activity. One recommendation was that TDAC/OSD should provide better direction to the services as to what data is needed by DoD, and permit the services to provide that data upon request. A second comment suggested that TDAC should emphasize analytical capabilities as opposed to appearing to concentrate on development of data bases. There was a suggestion that TDAC participate as an observer in the MANPRINT process in order to become more familiar with the Army MPT analysis process.

The next speaker was Major Andy Courtice of the USAF SIMSPO. Major Courtice stated his need for TDAC assistance in providing information to support Air Force MPT analyses. He cited an example of an expensive high-fidelity simulator which is under-utilized because of inadequate attention at the front-end to defining the true training need including manpower support. A discussion ensued about the role of TDAC in assisting those who need information in finding existing data sources and points of contact for the sharing of lessons learned. Many agreed that this would be a key role for TDAC even when the TDAC data bases were fully operational. As a result of Major Courtice's presentation and discussion which ensued, there seemed to be a growing awareness of the potential of TDAC to support service needs.

Lt Col Chuck West (TDAC), briefed the Occupational Cohort and Course Files project underway in the Individual Training Division. This was followed by a discussion of current service methods to determine the cost versus benefit of lengthening formal training courses. It was generally agreed that it was very difficult to quantify the benefit of increased formal training because of the lack of readiness measures and inability to weigh the impact on on-the-job training (OJT). The workshop was adjourned until the following morning.

Cordell Smithfield of the TDAC Cost Analysis Branch presented an overview of the Macro Training Cost and Occupational Specialty Cost data base efforts. In response to his comment about differences among the services in determining costs, one attendee suggested that TDAC should assist OSD in improving direction to the services on the standardization of cost estimating. There was a suggestion to look at the JOINS program as an example of how the Army maintains training cost data. There was also some sensitivity expressed in possible misuse of comparing cost data within and among services, because it would be inappropriate to try to draw one-to-one relationships between the costs of preparing different training populations for different jobs.

A question was raised as to the TPRC's role in determining what data could be released to whom and whether the TPRC would be able to keep up with this monitoring function. Another question arose regarding whether TDAC has considered a study to determine what the return on the (services') investment would be down the road.

The next speaker was Dr. Ron Hofer of PM-TRADE. He presented an overview of the analysis, design and development process for training devices within the Army. In response to Dr. Hofer's discussion of the Trade-Off-Analysis process, one attendee felt that inadequate attention was given to "Readiness Potential". The majority of the panel disagreed pointing to the critical first action of justifying the training requirement in terms which include the impact on Readiness Potential. The consensus was that trade-offs come later in evaluating alternatives to meet that requirement. One attendee pointed to Dr. Hofer's slide entitled "Key Operational Capabilities," which matched prioritized focal areas derived from the Army Battlefield Development Plan (BDP) with major lab thrusts, as a good example of how TDAC should analyze Service/DoD need matched to TDAC projects. Another attendee questioned whether the services were cooperating to integrate the BDP across services, or whether each do their own plan separately and wondered if TDAC should play a role in integrating these service areas. Most panel members including the TDAC representatives, believed this was beyond TDAC's mission.

Mrs. Vicki Dibbern of the U.S. Army Foreign Science and Technology Center (FSTC), presented an overview of that organizations mission and structure. Not surprisingly, much of FSTC's work is with the Intelligence community, although other military organizations can access information through appropriate channels. In response to questions regarding the utilization of data on foreign (threat and free world) application of simulator and training devices, she stated that they would welcome some tasking in that area and that currently there was limited interest (or awareness) within the Army for that type of data. The Air Force Foreign Technology Division was suggested as a source for Soviet flight simulator information.

Dr. Jim Young (TDAC) presented an overview of the Technology Transfer project. This included an overview of the Technology data base and description of some deliverable products such as the Computer-Based Instruction catalog and media selection model. One attendee voiced a strong concern that the media selection tools TDAC was developing be used by the services and not be used by OSD as a means to second guess the correctness of the service media selection process. This was explained by Dr. Young as being implicit but that the services could benefit by having prior access to the same data.

Following the lunch break Jim Henris wrapped up the series of presentations by recapping the S/TS projects and by describing the Front-End Analysis application areas. This consists of 1) a collaborative effort lead by ARI to define the FEA process and

how TDAC can support the services in this area, 2) the TDAC support to the ATF project, and 3) the "Footprint" MPT study. There was a suggestion that TDAC, test the Footprint methodology against existing MPT requirements methods being utilized on several emerging systems such as LHX. There was an additional discussion on a handout of the S/TS Data Base Design White Paper and Data Element Dictionary. The meeting was adjourned.


III. FINDINGS AND CONCLUSIONS. The results of the users' workshop could be grouped into several categories; positive reactions, negative reactions, and the evolving awareness of the long term benefit of integrated training information data bases. Initial positive reactions included the centralization of training effectiveness data and lessons learned from new technology applications, the ability of TDAC to direct queries to existing data sources and points of contact, the potential role of TDAC in assisting OSD to improve standardization of data reporting, and the ability of service users to utilize the analytical capabilities of TDAC when needed for individual service projects.

Negative or cautious reactions by the users included the potential for misuse of data through lack of safeguards controlling the release or misinterpretation of data, the perception that TDAC is creating large complex data bases which appear to duplicate existing service data sources without appreciable benefits to the services, the potential for TDAC/OSD to usurp or undermine service decision making prerogatives, and loss of limited service resources to TDAC with out readily apparent gains.

The most significant result of the workshop however, appeared to be the growing awareness on the part of the attendees of the need to support an increasingly more sophisticated service planning, design, and acquisition process with more readily available and better quality training related resources. It was evident that many participants were beginning to look at the whole MPT picture and were becoming more receptive to new ideas and tools which could support their decision making and justification activities. This is not to say that there is yet widespread support within the services for OSD to have a dominent role in providing such services. On balance our panel provided an excellent opportunity to exchange ideas and concerns that are at the heart of current issues.

# LABCOM TECHNOLOGY THRUSTS

## THRUST

- SENSORS
- SIGNAL PROCESSING
- INFORMATION PROCESSING
- ROBOTICS
- EXPERT SYSTEMS
- ADVANCED MATERIALS
- BIOTECHNOLOGY
- HUMAN FACTORS/PERFORMANCE ENHANCEMENT
- DIRECTED ENERGY WEAPONS
- SURVIVABILITY

## KOC + 1

- $C^3$
- RSTA
- BATTLEFIELD LETHALITY
- BATTLEFIELD SUSTAINMENT
- SOLDIER & UNIT PERF. ENHANCE
- LIGHTENING THE FORCE

O&S COST REDUCTION

11

# SIMULATION AND TRAINING SYSTEMS PANEL AGENDA

## March 19

| | | |
|---|---|---|
| 1330-1400 | Introduction and Overview (Data Element Handout) | Mr. S. McKee<br>COL L. Ransom |
| 1400-1500 | Simulation and Training Systems Division Overview | COL L. Ransom<br>Mr. J. Henris |
| 1500-1515 | Break | |
| 1515-1600 | USAF SIMSPO Data Requirements | MAJ A. Courtice |
| 1600-1630 | Individual and Unit Training (MPT) | LtCol C. West |

## March 20

| | | |
|---|---|---|
| 845-0915 | Cost Factors | Mr. C. Smithfield |
| 0915-1000 | USA PMTRADE Data Requiremenets | Dr. R. Hofer |
| 1000-1015 | Break | |
| 1015-1115 | USA Foreign Science & Technology Center | Ms. V. Dibbern |
| 1115-1200 | Training Technology Transfer | Dr. J. Young |
| 1200-1330 | Lunch | |
| 1330-1500 | Open Forum, Including Data Element Dictionary | COL L. Ransom |
| 1500-1515 | Break | |
| 1515-1630 | Session Wrap-Up | COL L. Ransom<br>Mr. S. McKee |

# SIMULATORS & TRAINING DEVICES PANEL

## ATTENDEE LIST

COL Harry J. Bacas

COL Ronald C. Baker

LT COL Gene Clayton

Ms. Juanita Davis

Ms. Myrna Davis

Ms. Vicki Dibbern

COL Carl D. Eliason

CAPT Roger Gerber

Mr. Jim Henris

Dr. Ron Hofer

Ms Kris Hoffman

LT COL Bert Itoga

Mr. Don Johnson

Mr. Billy Kennedy

CAPT Peter Kimball

LT COL John Langston

Mr. Steve McKee

LT COL Edward Morse

COL Lee Ransom

MAJ Charles F. Smith

COL Robert Spurrier

Mr. Mark Stenger

Ms Ginger Stutts

CMDR Marv Wellik

COL Alan Wetzel

14 (blank)

RESERVE COMPONENT TRAINING

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## RESERVE COMPONENT TRAINING

I. <u>INTRODUCTION</u>. The Reserve Component (RC) Training panel was attended by representatives of a multitude of organizations with a wide range of interests in the RC arena (see attendee list). The objectives of the RC panel were to inform RC trainers of TDAC projects, identify modifications to projects desired by the RC communities and begin a dialogue on potential new projects of special interest to RC trainers.

In order to achieve this overall goal, the TDAC Reserve Integration Division (RID) employed the following approach. First, since most of the attendees were relatively unfamiliar with TDAC, a general discussion of TDAC's mission and how RID supports the mission was presented. Integrated into this discussion was a presentation of the origins of current RID projects and their status. Secondly, the users were treated to a series of briefings of parallel efforts (non-RID and in some cases non-TDAC initiated) with implications for the RCs represented (ARNG, USAR, USNR, AFR), regarding potential beneficial cross component interactions. Finally, an open discussion was held in order to elicit attendees perceptions of how TDAC could assist them in accomplishing their training missions. This discussion surfaced several potentially fertile areas for development and demonstrated the need for additional dialogue and t ` cultivation of closer ties. It also identified a need for a mechanism to exchange information among the various users. The open discussion also reinforced the idea of applying technological solutions to the unique problems encountered in training the Reserve Component forces. The presentations and discussion in this area were lively and informative.

II. <u>DISCUSSION</u>. The following is a brief overview of the presentations delivered to the 1986 RC Training Panel. A Panel Agenda is attached. Mr. Gary Green (TDAC) began the presentations with a brief review of the RC workshop panel agenda. Mr. Green then presented the TDAC mission and a discussion of the way in which RID interacts with the other divisions of TDAC in order to insure that Reserve Component data base initiatives are fully supported in TDAC and that there is no duplication of effort. Finally, a discussion of the origins of current TDAC/RID projects was given.

LTC West (TDAC) then discussed ongoing TDAC efforts to establish a DoD wide occupation based cohort file. The benefits of such a file were enumerated as follows: It would provide a central repository for consistent and uniform training data for all DoD occupational specialities; facilitate studies of the entire training subsystem supporting a given occupational speciality; and, provide historical data for longitudinal studies. This project focuses on issues common to both AC and RC. Reserve unique data will be developed by RID to complement the basic file.

17

The next three presentations were directed at the concept of utilizing training technology to improve training in the DoD community and particularly in the RCs. First, Dr. Jim Young (TDAC) discussed his efforts to establish a TDAC Training Technology data base. The data base will provide training developers an information source regarding technology based training media and the costs of their implemention. Although the file is primarily oriented toward training institutions, it should have some application to the development of RC training. A panel discussion of this presentation centered around the RC need for technology applications directed at maintenance of skills in units versus those directed at initial skill acquisition in training institutions. Next, Dr. Ruth Phelps (ARI) presented the activities of the Training Technology Field Office in Boise, Idaho. Dr. Phelps' project consists of researching ways in which Training Technology can be applied to Army RC training problems. By using local ARNG and USAR units in a test bed mode, Dr. Phelps hopes to develop techniques that could be generalized to all Army RC units. One possibility discussed by Dr. Phelps was the use of computer networks to meet the training needs of widely dispersed ARNG and USAR units. Finally, Mr. John La Barbera (ATC) made a presentation of the Training Technology Application Project (TTAP) which is designed to bridge the gap between developers of training technology and the Air Force user community. The group was especially interested in his experience in developing courseware utilizing the media of interactive video disc (IVD). Mr. La Barbera noted the high cost of IVD development and stated that ATC's approach is to use IVD media selectively with other media in developing a course.

The final four presentations all pertained to TDAC initiatives and data bases. Mrs. Ann O'Kennon-Zimmerman (TDAC) presented the Military Training Area Data Base. Military training area resources were defined as mission-oriented Land, Air and Maritime ranges and training areas, both in country and overseas, as required by the JCS and the Services (active and reserve) to conduct effective combat readiness training. The object of developing such a data base is to create a central repository and retrieval process whereby the Services, JCS, and OSD can easily access information regarding capabilities, limitations, costs, availability and projected improvements of training areas. Next, Mr. Gary Green presented TDAC's efforts to build a Reserve Component Training Equipment and Facilities file. Planned data base contents include training equipment inventories available to RC and their use and requirements. Also to be included are training sites, facilities, areas and ranges which will be closely coordinated with the Military Training Area initiative. Mr. Steve Tabone (TDAC), then presented the projects of TDAC's Training Costs Branch. The Training Costs Branch has three main projects. First, a macrolevel training costs prototype data base has been developed which contains longitudinal data regarding training cost elements by appropriation/program and training category. The next project area deals with individual and collective training

18

cost data having variable and fixed cost elements. And the final project examines training system cost data pertaining to training system Life Cycle costs. LTC Jim Montgomery (TDAC) made the final presentation in this area. LTC Montgomery discussed the RC Budget Training Cost Report. This report is an interim step in developing a data base describing the cost of RC training. It currently contains the Services' Reserve Personnel Appropriation Costs for the past five budget years FY82-86. The report provides an historical presentation of actual and projected training costs for each training category included in the Personnel Appropriation Justification of Estimates. With that the panel proceeded into open discussion which ultimately produced the findings and conclusions for this report.

III. FINDINGS AND CONCLUSIONS. The following conclusions and new projects were identified by the panel members during the open discussion:

- RCs have not been advised by the Services of the establishment of TDAC. As a result, potential training related projects that are of interest to the Reserve Components (vice OSD or the Services) have not been included in the existing list of TDAC projects.

- The RC have some training needs that are unique. Training strategies developed for AC may not work well in these areas. These unique needs have not been clearly identified. A useful approach to defining training areas with unique RC needs might be based on examining: (1) structure - what are the RC skills that are key to mission success; (2) distribution - what skills are distributed such that only very small groups of RC members can be regularly brought together for training; and, (3) schedule - what skills have learning or decay curves such that infrequent (weekend and summer) training is not sufficient to acquire or maintain proficiency.

- A data base that describes the distribution of RC billets by skill and geographic location would be useful in developing requirements for fixed training activities that are intended to support skill populations in a given area. Examples include location-specific training such as USAR School MOS courses, planning for regional training facilities and equipment locations, scheduling new equipment training team itineraries, etc.

- RC's need information on training available in other components that is the same or similar to their own needs. Inter-Service sharing of training is common among RC's and would probably be increased if availability information were easily accessible.

- There is a broad RC interest in potential use of new Training Technologies (TT). However, TT orientation for RC

19

must be toward sustainment training in units versus current TDAC work which is primarily institutionally oriented.

- There is a need for an historical file that can identify the units that have participated in JCS and other major exercises.

- There is a need for a TDAC newsletter to keep users advised of projects, reports, operational data bases, etc.

- A network of DDN/MILNET/ARPANET mailboxes could be used as a communications link between TDAC users with common interests.

- Future workshops should use video tape to record simultaneous panels so that information can be obtained from all those panels.

- Procedures to task TDAC are not understood at the Service and MAJCOM level.

- A critique sheet at the end of the workshop might have produced useful information.

- The RC panel should have had stronger interaction with the Simulation and Training Devices panel since many of the RC training problems center around lack of training devices.

- There is a need for regular RC training workshops/users group meetings to share information on common training issues. Follow-on workshops should be focused on specific topics such as new technologies (IVD use and applications), costing, etc. Reserve Components could rotate as Host.

- RC trainers need more information about the training environment in the other RC's.

- TDAC should provide analysis of data, but the level of analysis should be tailored to specific needs of the user.

# RESERVE COMPONENT TRAINING PANEL AGENDA

## March 19

| | | |
|---|---|---|
| 1330-1415 | Introductions and Overview | Mr. G. Green |
| 1415-1430 | Project Introduction | Mr. G. Green |
| 1430-1500 | Occupational Cohort File | LTCOL C. West |
| 1500-1515 | Break | |
| 1515-1630 | Training Technology - TDAC Efforts | Dr. J. Young |
| | Army Training Technology Field Activity (TTFA) | Dr. R. Phelps |
| | Air Force Training Technology Applications Project (TTAP) | Mr. J. LaBarbera |

## March 20

| | | |
|---|---|---|
| 0830-0930 | Ranges & Training Areas | Ms. A. O'Kennon-Zimmerman |
| 0930-1000 | Equipment and Facilities File | Mr. G. Green |
| 1000-1015 | Break | |
| 1015-1100 | Macro Training Cost | Mr. S. Tabone |
| 1100-1200 | RC Budget Training Cost Report | LTC J. Montgomery |
| 1200-1330 | Lunch | |
| 1330-1500 | Open Discussion | All |
| 1500-1515 | Break | |
| 1515-1600 | Session Wrap-Up | Mr. G. Green |

## RESERVE COMPONENT TRAINING PANEL
## ATTENDEE LIST

Mr. Gary Bunting

LT COL Richard Clark

COL Ronald Copes

Mr. Charles Dougherty

COL Larry Edwards

Mr. Gary Green

MAJ Henry Hanrahan

Mr. Bill Horne

LT COL Ron Krisak

LCDR Douglas Lynch

LT COL Jim Montgomery

Dr. Scott Newcomb

Dr. Jesse Orlansky

Dr. Ruth Phelps

CDR William Rice

Mr. Kenneth C. Scheflen

LT COL Conrad Schray

LT COL Jean Sharpsteen

CAPT B.E. Sheffield

Mr. Steve Skiles

COL Charlie White

TRAINING TECHNOLOGY

24 (blank)

# TRAINING TECHNOLOGY

I. **INTRODUCTION**. Initial issues to be addressed by TDAC, submitted by DoD activities, focused on the common thread of Computer-Based Instruction (CBI) and its potential cost-effective deployment in DoD. The Training Technology Panel afforded TDAC personnel and interested service users the opportunity to exchange information on what TDAC is doing and what can be done to better meet service training technology needs. TDAC efforts in the training technology transfer area were described and participants then presented project data, discussed needs as a group and provided feedback to TDAC regarding direction.

Two presentations were made by TDAC personnel on project status and available products and 11 presentations were made by sevice and OSD attendees on Technology Transfer and CBI applications. There were 26 panel members, including 7 Army, 1 Navy, 11 Air Force, 4 TDAC, and 2 OSD.

II. **DISCUSSION**. The TDAC role as DoD facilitator of technology transfer (TT) was discussed with focus on recommendations by the 1982 Defense Science Board Summer study on Training and Technology. Thus far, the major TDAC effort has been on the development of a DoD training technology data base. Some work has been done on a TT lessons learned data file and some consideration has been given to training technology exchange with the private/public sectors. A description of TDAC's training technology projects was provided by Dr. James Young and the approach and project status were presented and discussed. A copy of the proposed data base structure and some sample reports were provided to the workshop attendees. Discussion of the TDAC efforts centered on how information would be collected and updated. Information about the inclusion of cost and utilization of technologies, such as CBI, was also discussed.

The Air Force Training Technology Application Program (TTAP) was briefed by the AF Training Command (ATC) program manager with emphasis on the end user (training manager, training developer and training instructor). The program invests in high pay-off, low-risk projects with general appeal. Example projects were discussed. Questions about TTAP were directed at project magnitude of Interactive Video Disc (IVD) efforts and possibility of product and process sharing among other agencies. Stimulating discussions focused on IVD course content, development costs and expected benefits. The group was very interested in the operation of the TTAP.

The representative from the Army Technology Transfer Agency (TTA) presented an overview of the TRADOC Training Technology Transfer Program. He emphasized that the goal of the TTA program is very similar to the AF TTAP but the approach is somewhat different. The work done by the TTA focuses on course

development at a number of test sites as opposed to unconstrained problem solving on a global basis like TTAP. He went on to discuss the mechanics of the program. Discussion of the TTA presentations revolved around how courses for technology application were selected as well as funding issues (procurement funds vice operation and maintenance funds). The group was interested in the project selection process and the management of the program.

The Navy Training Technology Implementation Program was presented by the CNET representative. The presentation focused on the Navy's attempt to build a bridge between the researchers and trainers. He emphasized that the program is similar to the Army and Air Force programs and there is a basis for information exchange amongst the services.

Following the Service technology transfer presentations, discussion focused on joint-service issues, program commonalities, and resource sharing. There was general agreement that there aren't enough funds for all potential projects, and that cooperative efforts should be undertaken when feasible.

A presentation was made on the Army Electronic Information Delivery System (EIDS) by a representative from Army Training Support Center (ATSC). The briefing began with an explanation of the evolution of the need for an automated system similar to EIDS. The Army was becoming buried in paper in the 80s and, as a result, TRADOC and the Army Material Command began to look at the cost of paper delivery and the cost of electronic delivery. Cost was going down for electronic delivery. EIDS (Electronic Information Delivery System) was conceived to address these Army problems. It has potential for use by all Services, even though there are some shortfalls in existing systems. A brief description of EIDS was provided. Discussions of the EIDS program focused on the problem of documented requirements, courseware development and product implementation.

An Army representative from Ft. Gordon led a discussion about video disc courseware development. The basic experience gained by the Army Signal Center at Ft. Gordon in video disc courseware development formed the departure point for the discussion. This presentation was a continuation of the EIDS discussion and discussions ended on a positive note closing out the first day of the workshop.

The second day of the workshop focused on CBI. Dr. Young presented the TDAC CBI projects which include definition development, research and development reports, lessons learned and systems data base to support a CBI catalog. The data structure and data dictionary documents were provided to the users' group. Discussion focused on whether the database should be on-line and how the data would be collected and maintained. Also, concern was voiced about the perishability of the data.

A presentation of the OSD CBI guidelines was made by an OSD representative. He emphasized that specific data would be needed to support programs. He discussed the common sense approach used in the guidelines and indicated the Services needed to formulate policy position for implementation. After the guidelines presentation, discussion focused on the need for inventory type data in order to enhance budgetary processes.

An AF representative presented the Advanced Training System (ATS) that was patterned after the AOTS but targeted for the AF ATC environment. He outlined how the ATS evolved and explained why it followed its particular path. Discussion focused on the development of requirement statements in resident training programs. There was quite a bit of interest in the ATS model and the process of model development. There was some discussion about existing vs. evolving computer technology.

Again the difficulties associated with obtaining information on current technologies was articulated. The discussion focused on development of training to support new systems being fielded.

The Advanced-on-the-Job Training System (AOTS) was presented by a representative of the AF HRL. He outlined the project and provided milestones for prototype development. He indicated the systems objectives, described the problems with the current USAF OJT system and discussed the scope and thrust of the project. Discussions centered on amount of time required to field the system, the use of ADA code and systems integration.

The AF Air Training Command CBI policy was presented by an ATC representative. He described the process by which ATC CBI policy was developed and discussed the lessons learned from this type of policy development. He indicated that ATC has developed a regulation, ATCR 80-3, to govern CBI development. Comments and discussion focused on the use of government owned hardware to support internal CBI programs. Some discussion of software and courseware costs occurred.

A representative from the Director of Operational Training, Rated Management Division, HQ AF/XOOTD, presented the aircrew training systems approach to CBI. He indicated that the number of CBI systems is proliferating. He discussed the indicators of and reasons for this proliferation. The approach being developed by XOOTD to meet the Air Crew Training needs would yield a common CBI System for aircrew training. Again the discussion focused on system requirements and intelligent use of the CBI technology.

An Army representative from Fort Belvoir presented a description of the Joint Committee for Computer Based Instruction (JCCBI) system. He provided an overview to the subject and then focused on operation at the Army Engineering school at Ft. Belvoir. He provided very insightful information on CBI courseware development.

Discussion focused on the cost of CAI courseware development. The problem of obtaining experienced people was addressed and in-house versus contractor developed courseware were discussed.

III. <u>FINDINGS AND CONCLUSIONS</u>. The workshop attendees considered the time well spent. It afforded an opportunity to exchange program and project information with their counterparts. The following are the findings of the panel meetings:

- There is a lack of available training technology information from a single source.

- Technology and project data are highly perishable.

- There is significant potential for joint service training technology projects.

- Cost of CBI/IVD courseware development is a driver in new employment technologies.

- Front-end analysis including validation of system requirements, contributes to applications of training technology.

The following conclusions were drawn from workshop discussions:

- TDAC could be the right focal point to facilitate training technology data exchange.

- Perishability of data should be recognized by TDAC and its users.

- Opportunities to reduce cost and/or accelerate development through joint projects are available.

- Employment of new technologies could be improved by better documentation of development costs and availability of tools supporting courseware development.

- Ineffective and inefficient course materials are a consequence of incomplete, inadequate, or non-existent front-end analysis.

# TRAINING TECHNOLOGY PANEL AGENDA

## March 19

| | | |
|---|---|---|
| 1330-1400 | TDAC Role in Technology Transfer | Mr. S. Merriman |
| 1400-1415 | Training Technology Application Program in ATC Tech Transfer | Mr. J. LaBarbera |
| 1415-1430 | Training Technology Field Activity in Army Tech Transfer | Dr. F. Aversano |
| 1430-1445 | Training Technology Implementation Program in Navy Tech Transfer | Mr. W. Hayes |
| 1445-1500 | Electronic Information Delivery System | Mr. F. Giunti |
| 1500-1515 | Break | |
| 1515-1630 | Interactive Videodisk | Ms. J. Clark |

## March 20

| | | |
|---|---|---|
| 0830-0900 | TDAC CBI Products | Dr. J. Young |
| 0900-0930 | OSD Computer Based Guidelines | Mr. G. Boycan |
| 0930-1000 | Air Training Command CBI Policy | Dr. Schufletowski |
| 1000-1030 | Aircrew CBI Policy | LTC Baltazar |
| 1030-1100 | Break | |
| 1100-1130 | AF Advanced Training System | LTC Pohlman |
| 1130-1200 | AF Advanced On-the-Job Training System | MAJ Costellic |
| 1200-1330 | Lunch | |
| 1330-1415 | Joint Committee on Computer-Based Instruction | Dr. F. Aversano |
| 1415-1500 | Ft. Belvoir "JCCBI Node" | CPT J. Schroedel |
| 1500-1515 | Break | |
| 1515-1630 | Panel Session Wrap-Up | |

# TRAINING TECHNOLOGY PANEL

## ATTENDEE LIST

LT COL Bill Baltazar

Mr. Tony Boswell

Mr. Gary Boycan

Mr. Lloyd Burtch

CAPT James Campbell

1LT Charles Campbell

Ms Jenny Clark

MAJ Martin Costellic

LT COL Mike Dickinson

Mr. Frank Giunti

Mr. Steve Goldberg

LT COL Dickie Harris

LT COL Jim Harrison

Mr. William Hayes

MAJ John Jasper

Mr. John LaBarbera

CDR John Douglas Lynch

Mr. Steve Merriman

Mr. Tracy Mixon

Ms. Gloria O'Keefe

Ms. Toni Russ

CAPT Joseph Schroedel

Dr. Frank Schufletowski

Ms. Margaret Scott

Mr. Steve Skiles

Mr. John R. Snider

Mr. Homer Thompson

CAPT Bernie Westoff

Dr. Jim Young

RANGES AND TRAINING AREAS

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## RANGES AND TRAINING AREAS

I. __INTRODUCTION__. Because of multiple requests from JCS and the Services for a ranges and training areas data base, one of TDAC's 3 to 5 year taskings is to develop a military training area resources data base. The compilation of this data base was initiated by developing a prototype data base for small caliber ranges in the New England and New York states. The development of this specific data base was in response to a question from the Office of the Assistant Secretary of Defense (Reserve Affairs) (OASD(RA)): "Where can the Guard and Reserve units conduct annual qualification firing?" Review of the prototype data base, as well as review of subsequent development plans, by the users was now timely and appropriate. Navy, Army, and Air Force representatives were present during the workshop. Mr. Al Zimmerman, Department of the Army Ranges and Targets/National Training Center (DART/NTC) and Mr. Tom Van Petten, Tactical Air Command, presented overviews of their current and projected plans for range data collection and reporting. A list of attendees is attached.

II. __DISCUSSION__. The attached agenda indicates the areas that were discussed during the workshop. The main elements that were addressed are as follows:

Mr. Paul Wampner, TDAC, began the Ranges and Training Areas Users Group Workshop by identifying the issues which would be addressed and what was expected from the group. He identified the objective of the project and defined its dimensions. He then briefed the group on the current and projected plans for developing the military training area resources data base including TDAC support to:

o Military Operating Area Analysis
o Range Improvements and Utilization Report
o Development of the Army Automated Range Data Base
   (proposed)

The short term product, Training Resources: Small Caliber Ranges in New York and New England, was distributed and discussed briefly. Two issues arose: first, it was pointed out that the data base did not carry a field of data describing the type of training qualification that could be accomplished by using the range; second, it was noted that inactive ranges should be flagged in some manner.

Mr. Al Zimmerman, Deputy Director for DART/NTC, briefed the group on the composition and status of the Army Ranges and Targets Management Information System (ARTMIS). TDAC and DART/NTC have drafted a memorandum of understanding (MOU) to work together to initiate collection of range information for this data base.

Mr. Al Stults and Mr. Danny Oakes, TDAC support contractors, presented a demonstration of the prototype data base to include the data management system, report types, and table talk. Group members asked questions and actively participated in the demonstration.

Mr. Tom Van Petten, USAF-TAC, discussed USAF problems in representing the utilization of ranges data in meaningful figures. He stated that TAC is instituting development of an automated range utilization reporting system.

Mr. Joe Nicholson of TDAC briefed the group on the data gathering process used by TDAC in collecting information for the prototype small caliber ranges data base. He explained the element sets that were identified and used in the prototype data base. He then explored with the group the possible expansion of data base elements, as well as ways to improve/enhance the data collection, validation and updating processes.

Mr. Paul Wampner, TDAC, defined and explained the TDAC Modus Operandi for access to and release of data.

Finally, Mr. Wampner led a group discussion on possible directions for expansion of the ranges and training areas data base. He pointed out that the data base would be developed by modules beginning with those areas that are identified by the users as having highest priority. Mr. Van Petten stated that he thought that TDAC assistance would be valuable during TAC development of the USAF range utilization reporting system. Fleet Analysis Center (FLTAC) representatives also expressed an interest in the automation of their range directory.


III. FINDINGS AND CONCLUSIONS. The Ranges and Training Areas Users Workshop proved to be an excellent forum for the exchange of information between TDAC and user representatives in the Services and OSD. Although no specific prioritization of requirements was reached, members were interested and receptive to the design and capabilities of the prototype data base. As a result, the following actions are planned:

- TDAC and DART/NTC will proceed with their joint effort to build ARTMIS pending review and approval by HQDA.

- TDAC and TAC will investigate the feasibility of a collaborative effort in the design of the Air Force range utilization reporting system.

- TDAC will continue dialogue with FLTAC representatives to determine if TDAC can assist in the automation of the Navy's ranges data base.

- Because of resource constraints and the need to initiate the DART and TAC projects, further additions to the small arms data base will be made at a slower rate as manpower permits.

- It was agreed that TDAC would act as a clearing house to inform users of the dates of respective Service range conferences so that these meetings could also be used as forums for information exchange. Further, it was recommended that TDAC's Collective and Joint Training division should conduct additional user workshops to keep users informed of TDAC tasks and progress to date.

# RANGES AND TRAINING AREAS PANEL AGENDA

<u>March 19</u>

| | | |
|---|---|---|
| 1330-1345 | Introduction | Mr. P. Wampner |
| 1345-1400 | Overview of the Data Base | Mr. P. Wampner |
| 1400-1420 | Sources of Data | Mr. J. Nicholson |
| 1420-1440 | Initial Data Base Organization | Mr. J. Nicholson |
| 1440-1510 | Break | |
| 1510-1630 | Data Base Automation | Mr. A. Stults |

<u>March 20</u>

| | | |
|---|---|---|
| 0830-0900 | Army Ranges & Targets Management Information System | Mr. A. Zimmerman |
| 0900-0930 | USAF-TAC Range Utilization Reporting System | Mr. T. VanPetten |
| 0930-1015 | Data Element Discussion | Mr. J. Nicholson |
| 1015-1030 | TDAC Data Gathering Process and How to Improve It | Mr. J. Nicholson |
| 1030-1045 | Break | |
| 1045-1100 | TDAC Modus Operandi | Mr. P. Wampner |
| 1100-1115 | Project Development Plan | Mr. Paul Wampner |
| 1115-1200 | User Considerations (Group Discussion) | Mr. Paul Wampner |
| 1200-1330 | Lunch | |
| 1330-1315 | Summary of Findings | Mr. Paul Wampner |
| 1315-1345 | Presentation of Draft Report | Ms. A. O'Kennon-Zimmerman |
| 1345-1400 | Memoranda of Understanding/ Agreement to be Prepared | Mr. P. Wampner |
| 1400-1415 | Agreement on Group Report | All |
| 1415-1430 | Discuss Needs For Additional User Meetings | All |

# RANGES AND TRAINING AREAS PANEL

## ATTENDEE LIST

Mr. Ed Grant

Dr. Tom Killion

LT COL Jim Montgomery

Mr. Joseph Nicholson

Mr. John Norris

Ms Ann O'Kennon-Zimmerman

LT COL Phil Ray

MAJ Brian Raymond

LT COL Jean Sharpsteen

Mr. George Tilson

Mr. Tom Van Petten

Ms Shirley Wallace

Mr. Paul Wampner

Mr. Al Zimmerman

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TRAINING COSTS

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# TRAINING COSTS

I. <u>INTRODUCTION.</u>  A variety of organizations with a broad range of interests in the TC arena were represented in the Training Costs panel (see attached attendee list).  The objectives of the TC Panel were to provide attendees with information on TDAC's current projects, and to identify user interests, needs and requirements for possible future TDAC efforts.  In order to achieve these objectives, the following approach was used. First, a general presentation was given indicating TDAC's mission and how the training cost group supports that mission. Second, briefings were presented on the current TC projects and their status.  Finally, an open discussion was held to afford attendees the opportunity to exchange information on various training issues and identify areas where TDAC could be of assistance in meeting their needs for training cost data and information.

II. <u>DISCUSSION.</u>  The following is a brief overview of the presentations delivered to the TC Panel (see attached agenda). Lt Col Bryant began with a general presentation of TDAC's mission and how the DIA Division interacts with other TDAC groups and divisions to insure that training cost data base initiatives are fully supported in a cohesive manner without duplication of effort.  Integrated into this presentation was a discussion of the kinds of tasks and issues received to date by TDAC, a discussion of the global framework adopted for training cost data bases and a brief overview of initial TDAC projects.

Mr. Steve Tabone then discussed ongoing TDAC efforts to establish a longitudinal data base portraying Service's macro level Budget/FYDP training funds by appropriation, program element and training category.  The benefits of such a file are as follows:  provide a central repository for consistent and uniform macro level training fund data; facilitate the preparation of the Military Manpower Training Report (MMTR) and other required reports using macro level training funds; and provide historical data for trend analyses.

Next, Mr. D.C. Smithfield discussed current TDAC efforts to establish longitudinal data bases for occupational-specialty level and individual course level training costs.  These files will support ongoing efforts by the Individual Training Division to develop a DOD wide occupational based cohort data file, which when completed, will facilitate studies of the entire training subsystem associated with any given occupational specialty. These two training cost files will also provide a central repository of consistent and uniform cost data to assist users in conducting various kinds of trade-off analyses, in establishing linkage with training performance measurements, and in conducting trend analyses.

Finally, Mr. A. J. Boudreaux discussed ongoing TDAC efforts to establish appropriate data bases in the training systems arena. Initial efforts have focused on identification of training system cost data and their associated requirements, structures and applications. Future emphasis will be on the development of data bases for generalized cost element structures and other needs as identified by users. The benefits of the files in this arena are as follows: provide a central repository of widely used training system cost data; facilitate development of training curricula and analysis of instructional media trade-offs; and provide historical data necessary to develop required cost factors and conduct trend analyses.

The discussions during both the above presentations and the open forum session that followed surfaced a variety of training cost issues which appear to be excellent candidates for future TDAC efforts. The discussions also clearly demonstrated the need for continued dialogue and exchanges of information among interested users and TDAC.

III. FINDINGS AND CONCLUSIONS. The following list of items represents the findings and conclusions of the TC panel members:

- The workshop provided a beneficial exchange of information which allowed attendees to understand TDAC's ongoing efforts, learn ideas from each other, and discuss their needs for TDAC efforts. There is a need to have additional general workshops in the future, as well as workshops focusing on specific training cost issues.

- TDAC should concentrate its efforts on facilitating the exchange of data, techniques and methodologies that would help DOD training cost organizations accomplish their missions more effectively.

- TDAC's role for training cost information should involve developments in three basic areas:

    o data bases to serve as a central repository for historical information which would be accessible to service users in performing longitudinal analyses

    o models, techniques, relationships and methodologies which would facilitate trade-off analyses, development of cost estimates, and performance of reviews and validations

    o reference documents of various kinds that would serve to enhance the exchange of information throughout the TC community.

- There is broad interest in TDAC's ability to assist the training community in the establishment of meaningful standardization of cost element structures,

42

definitions/terminologies, work breakdown structures, costing methodologies, etc.

- In developing the Macro Level Training Funds data base, there is a need to capture the training loads and flying hours that justify the funding levels.

- There is a need for TDAC to document and distribute to interested users the techniques and methods used in determining the variable costs associated with formal, resident training courses.

- Interservice Training Review Organization (ITRO) efforts to standardize procedures and methods for developing annual formal schools training costs should be resurrected.

- There is keen interest in development and distribution of a training cost community directory which would document the functional operation of organizations and identify training cost counterparts within the Services.

- An immediate requirement exists to develop a tri-service position for the update of MIL-STD-881, Work Breakdown Structure.

- There is broad interest in efforts to develop a comprehensive cost element structure for life cycle costing exercises associated with new training systems.

- There is a need for a TDAC newsletter to keep users advised of projects, reports, meetings, symposia, etc.

- Procedures to task TDAC are not understood by users, nor are the criteria for determining how requested tasks/projects are funded.

- TDAC should be prepared to provide analyses of data supplied by a user, but such analyses should be tailored to specific user needs.

# TRAINING COST PANEL AGENDA

## March 19

1330-1500      Administrative Remarks & Introductions

               OBJECTIVE 1:  Overview of Tasks & Issues

                  A. Sample Tasks/Issues Received to Date
                  B. Preliminary Cost Data Global Framework
                  C. Initial TDAC Efforts - Blue Project Books
                  D. Short Term Product

1500-1515      Break

1515-1630      OBJECTIVE 2: Future Project Considerations

                  A. Present Tentative List
                  B. Refine List
                  C. Prioritize Topics on List
                  D. Identify Points-of-Contact, Users
                       and Sponsors for Each Topic

## March 20

0830-1000      OBJECTIVE 2 (Continue Discussions)

1000-1015      Break

1015-1200      OBJECTIVE 3:  TDAC Training Cost User Panel

                  A. Present Requirements/Benefits for a
                     Permanent Users' Panel
                  B. Determine Structure
                  C. Identify Points-of-Contact/Members
                  D. Set Up Meeting Schedule

1200-1330      Lunch

1330-1500      Open Discussion of Objectives 1, 2 & 3 or
               Other Issues

1500-1515      Break

1515-1600      Session Wrap-Up

# TRAINING COSTS PANEL

## ATTENDEE LIST

Mr. Buddy Armstrong

Mr. Thomas Arnett

LT COL Bob Boswell

Mr. Al Boudreaux

Mr. Gary Boycan

Mr. Ed Boyle

LT COL Mike Bryant

Mrs. Elizabeth Calloway

CAPT Joseph Chapa

Mr. Bryan Collyar

LT Jeffery Comer

Mr. Lewis Fisher

Mr. Merv Frantz

Mr. Russell Genet

Mrs. Judy Grzanich

COL Michael Lane

Mr. Edward R. McCauley

CAPT Nat Piscitelli

COL Richard Post

Mr. William Rayburn

Mr. Timothy Sharp

Mr. Cordy Smithfield

Mr. David Stolmack

Mr. Steve Tabone

Mr. George Tilson

CAPT Charles Watkin

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# CONCLUSIONS

The attitudes expressed by workshop participants can be grouped into three categories - negative reactions from some attendees who are concerned over a new organization working in the training arena; positive reactions from those who are immediately interested in any organization which could be of assistance to them in tackling common issues and problems; and finally, an emerging awareness by attendees of the long-term benefits to be derived from TDAC data bases and analytical capabilities.

Negative, or perhaps better stated, cautious reactions by attendees included the following concerns:

- the potential for misuse of data through lack of proper safeguards controlling the release of data or through misinterpretation of data

- the perception that TDAC is creating data bases which appear to duplicate existing Service data sources without appreciable benefits to the Services

- the potential for TDAC/OSD to usurp or undermine Service decision-making prerogatives

These are valid concerns for any new organization that serves in the capacity of a DOD central repository and clearinghouse for data - whether the data are training oriented or otherwise. Consequently, one of the chief purposes of the Users Workshop was to discuss with Service representatives the safeguards incorporated into the TDAC charter and modus operandi which are designed to insure that these concerns do not materialize. Based on the multitude of requests for TDAC future efforts that emerged from the technical panels, plus the virtually universal consensus of attendees on the desirability of additional user workshops, it can be concluded that there was a reasonable level of success in communicating the adequacy of current safeguards.

The positive reactions expressed by service attendees from the five technical panels included the following major points:

- The perishability of technical and project training related data requires a central repository to maintain the data and provide accessibiltiy to it for future use.

- Considerable interest and support was expressed concerning the beneficial capabilities of prototype data bases being developed by TDAC.

- There is a need for TDAC to be a focal point for exchange of information on training technology advancements and applications.

- A key role envisioned by some of the attendees for TDAC is assisting others to find existing data sources, locating needed points of contact, sharing lessons learned and, in general, facilitating the exchange of training information.

- There is considerable perceived value in the ability of TDAC to assist OSD and the Services in improving standardization of data structures and reporting procedures.

- There is keen Service interest in the ability to use TDAC's analytical capabilities when the analyses are tailored to the specific needs of the user.

- There is a need for a TDAC Newsletter and/or other means of communication to keep users advised of projects, reports, operational data bases, procedures for requesting data and assistance, etc.

- Finally, there is widespread interest in TDAC holding additional user workshops to share information on common training issues, emerging training technologies and specific problem areas.

In addition to these positive reactions to TDAC's mission and capabilities, numerous requests were made for TDAC to conduct a wide variety of future efforts on specific data bases and analyses.

The most significant result of the Users Workshop, however, appeared to be the growing awareness on the part of the attendees of the potential benefits to be derived from TDAC's data bases and analytical support capabilities; this seemed to be especially true for representatives of the reserve components. The workshop also served to reinforce the considerable potential of TDAC to provide information in the form of data and/or analyses that individual offices in the Services often find difficult to obtain - the kind of information that is becoming more and more vital in support of increasingly sophisticated planning, design, development and operational requirements.

ATTACHMENTS

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ATTACHMENT A

PLENARY SESSION TRANSPARANCIES

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WELCOME AND TDAC OVERVIEW

Dr. G. Thomas Sicilia, Director

A-6 (blank)

TRAINING DATA AND ANALYSIS CENTER

TDAC

DEPARTMENT OF DEFENSE
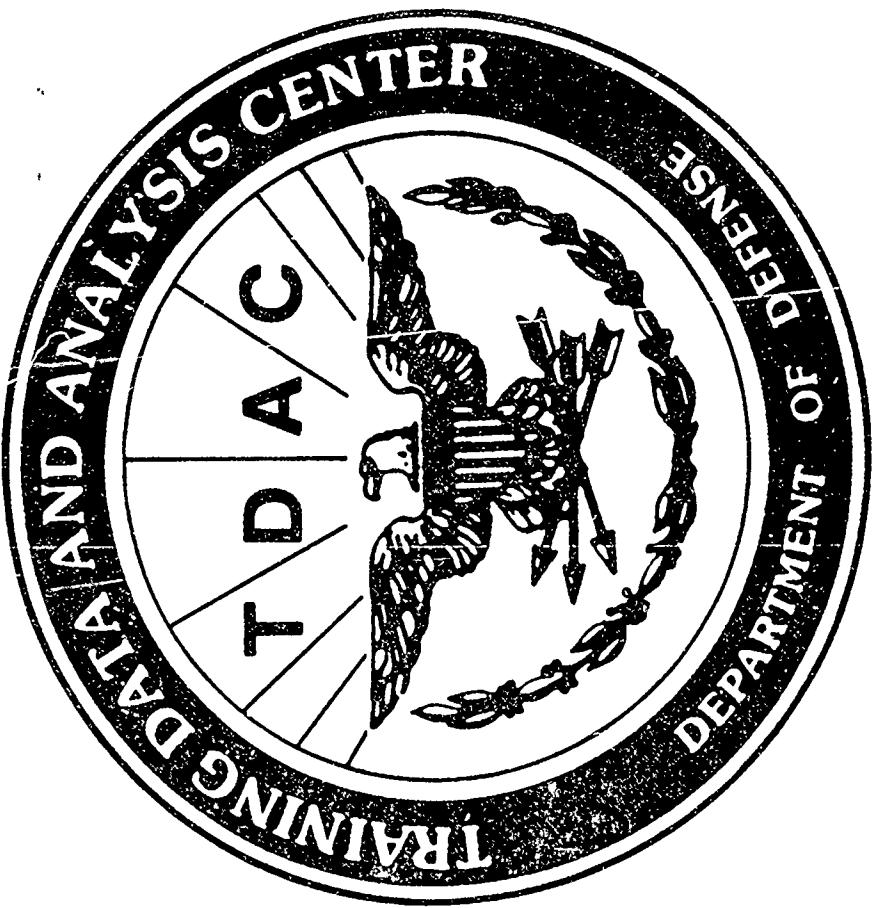
# MISSION

**PROVIDE TRAINING RELATED INFORMATION AND MANAGEMENT SUPPORT TO THE OFFICE OF THE SECRETARY OF DEFENSE, THE MILITARY SERVICES AND THE ENTIRE DEFENSE TRAINING COMMUNITY.**

- **COLLECT, INTEGRATE, STORE AND ANALYZE AVAILABLE TRAINING INFORMATION.**

- **RESPOND TO ANALYTICAL AND SPECIFIC INFORMATION REQUESTS FROM THE DoD MANPOWER AND TRAINING COMMUNITY.**

- **ACT AS THE DoD FOCAL POINT AND CENTRAL REPOSITORY FOR DEFENSE TRAINING RELATED INFORMATION.**

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A-8

# PROGRAM/POLICY CHAIN OF COMMAND

```
                    SECRETARY OF DEFENSE
                            |
          +-----------------+-----------------+
          |                                   |
     ASD (FM&P)                          USD (R&E)
          |
   +------+------+
   |             |
OSD TRAINING    DASD
STEERING        (MM & PP)*
COMMITTEE            |
(TSC)          +-----+----------+
               |                |
           DIRECTOR        JOINT SERVICES TDAC
        TRAINING DATA AND   PROGRAM REVIEW
        ANALYSIS CENTER    COMMITTEE (TPRC)
            (TDAC)
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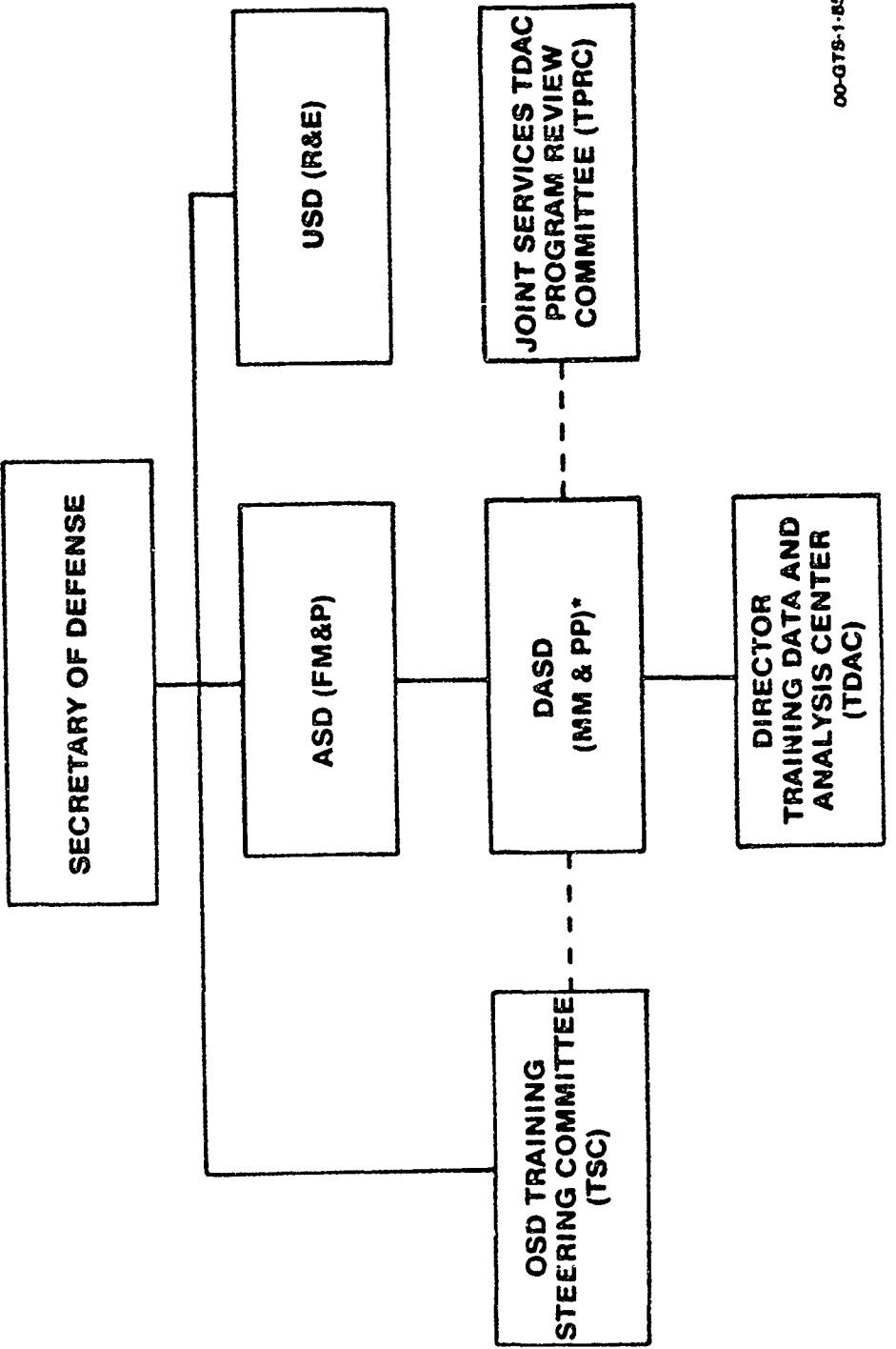
*CHAIRS BOTH THE TSC AND THE TPRC

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A-9

# KEY INTERFACES AND LIAISON

**JOINT SERVICES TDAC PROGRAM REVIEW**                    **QUARTERLY**
**COMMITTEE (TPRC)**
- FLAG LEVEL MEMBERS FROM EACH SERVICE
- CHAIRED BY DASD MM&PP

**OSD TRAINING STEERING COMMITTEE (TSC)**                 **QUARTERLY**
- DASD LEVEL MEMBERS PLUS JCS J3
- CHAIRED BY DASD MM&PP

**INTERSERVICE TRAINING REVIEW**                          **SEMI-ANNUAL**
**ORGANIZATION (ITRO)**
- SERVICE TRAINING COMMANDERS
- TPRC MEMBERS

**JOINT SERVICE MANPOWER AND TRAINING**                   **ANNUALLY**
**LABORATORIES**
- R&D LAB COMMANDERS AND TECHNICAL DIRECTORS

**DOD/INDUSTRY TRAINING CONFERENCES**                     **PERIODICALLY**

A-10

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## MILESTONES

| | |
|---|---|
| AUG 84 | TDAC BEGINS OPERATIONS |
| NOV 84 | TDAC FUNCTIONAL DESCRIPTION APPROVED |
| JUL 85 | TDAC INITIAL (3-5 YEARS) TASKING APPROVED |
| DEC 85 | TDAC MODUS OPERANDI ESTABLISHED |
| DEC 85 | INITIAL SHORT-TERM PRODUCTS |
| MAR 86 | FIRST TDAC USER WORKSHOP |

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A-11

# DIMENSIONS OF TRAINING DATA
## TDAC CONCEPT

TDAC DATA BASES

TRAINING SYSTEM PERFORMANCE

SIMULATION & TRAINING DEVICES

MPT IN ACQUISITION

FRONT END ANALYSIS

TECHNOLOGY TRANSFER

CBI

EXERCISE LESSONS LEARNED

RANGES AND TRAINING AREAS

JOINT TRAINING

INDIVIDIAL PERFORMANCE

UNIT PERFORMANCE

SCHOOLHOUSE

OJT

LIFE CYCLE TRAINING BY OCCUPATION

MOBILIZATION TRAINING

RESERVE TRAINING

TRAINING COST

CLEARING HOUSE

A-12
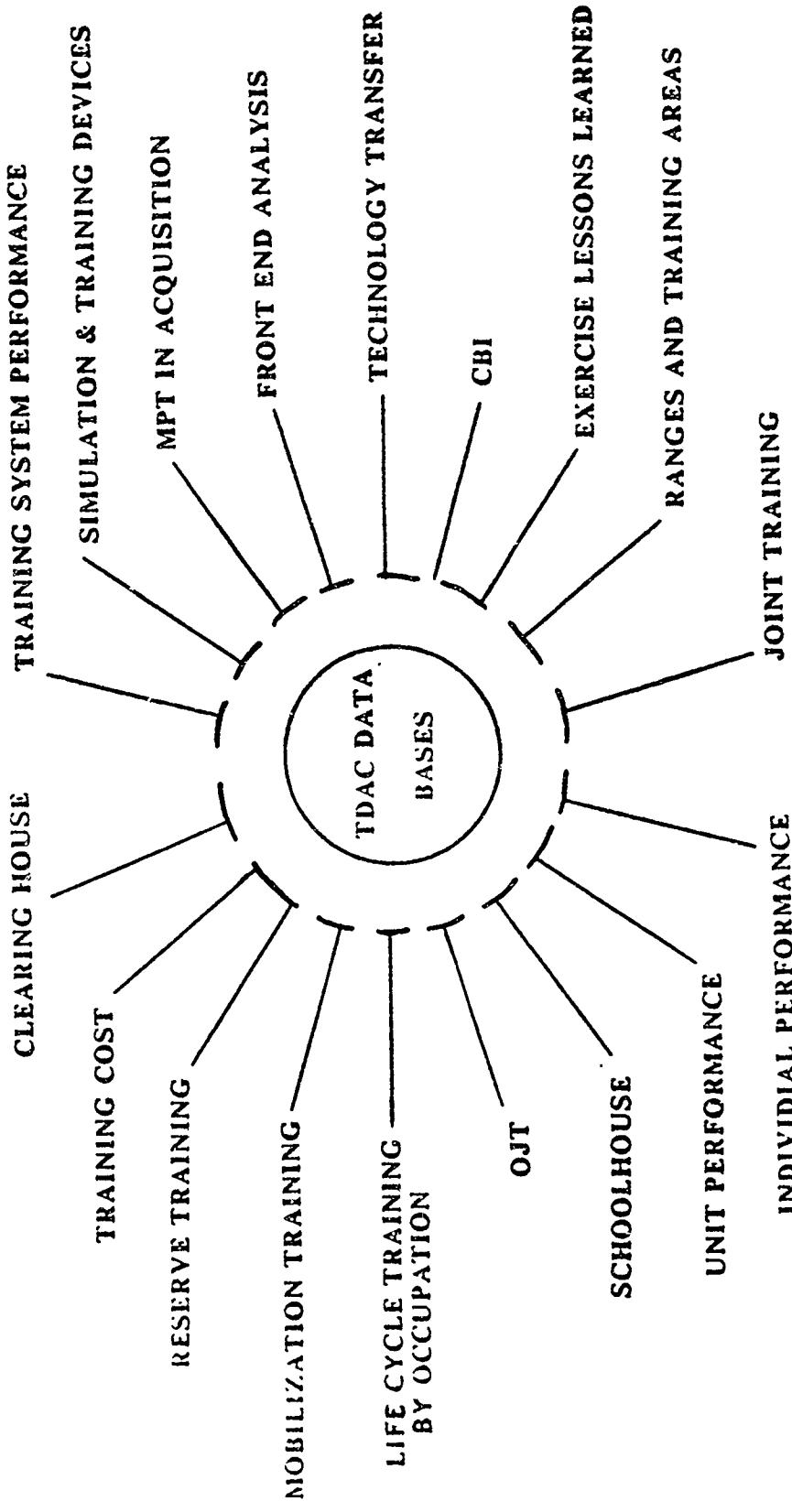
# TDAC RULES OF THE ROAD

● SUPPORT ENTIRE TRAINING COMMUNITY

  - BE RESPONSIVE TO USERS NEEDS
  - PROVIDE STARTING POINT OF SOUND DATA
  - TRY TO KEEP USERS IN LOOP
  - TAKE PRAGMATIC VIEW

● WORK IN POLICY RELEVANT AREAS -- BUT DON'T SET POLICY

● USE BASIC FORMULA:

  PROJECT PRIORITY = USER COMMITMENT X POTENTIAL PAYOFF

## TDAC RULES OF THE ROAD
### (CONTINUED)

- CAPITALIZE ON EXISTING DATA AND DATA SYSTEMS

  - AVOID NEW DATA COLLECTIONS

- QUALITY CONTROL ALL TDAC DATA

- REMEMBER: REAL PAYOFF IN LONGER TERM

  - FOCUS ON SHORT TERM PRODUCTS

- KEEP EVERYTHING IN PERSPECTIVE

  - DON'T LOSE SIGHT OF MISSION OR BIG PICTURE

TDAC ORGANIZED FOR SUPPORT

Colonel Bobby P. Tindell, Deputy Director

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TRAINING DATA AND ANALYSIS CENTER

TDAC

DEPARTMENT OF DEFENSE
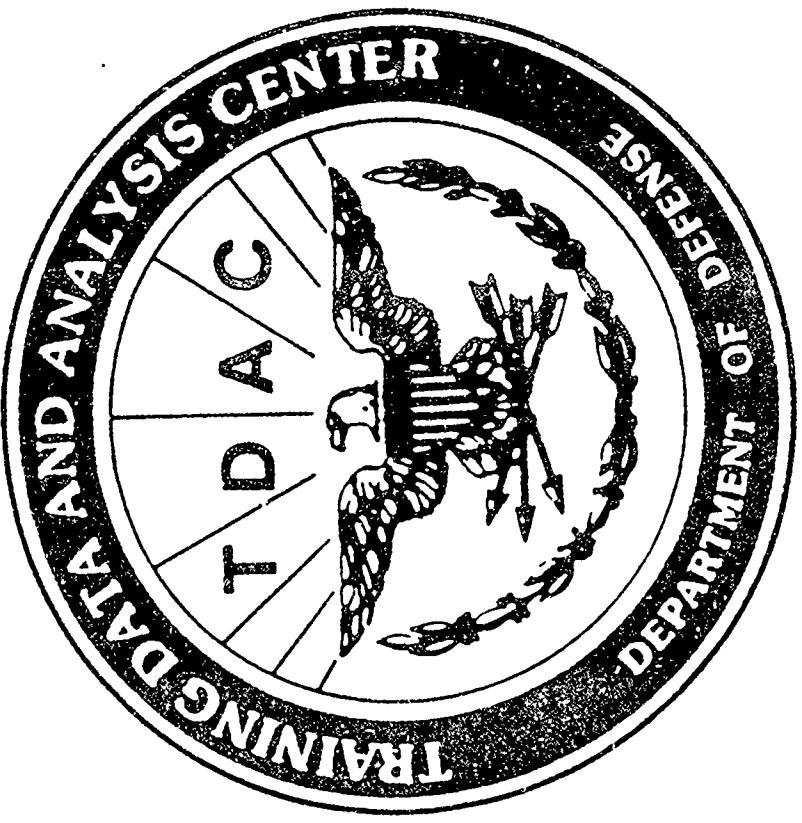
TDAC   ORGANIZED   FOR   SUPPORT

# BRIEFING OVERVIEW

- TDAC ORGANIZATION

- OPERATIONS AND LINKAGES

- DATA BASES CONCEPTS
  - TASKING DEVELOPMENT
  - DATA BASE DEVELOPMENT

- SHORT-TERM PRODUCTS

# TDAC ORGANIZATION CHART

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                          ┌──────────────────┐
                          │  COMMAND GROUP   │
                          └──────────────────┘
                      DIRECTOR,
                      TOM SICILIA, (SES-04)
                      DEPUTY DIRECTOR,
                      BOBBY TINDELL, (COL USAF)
```
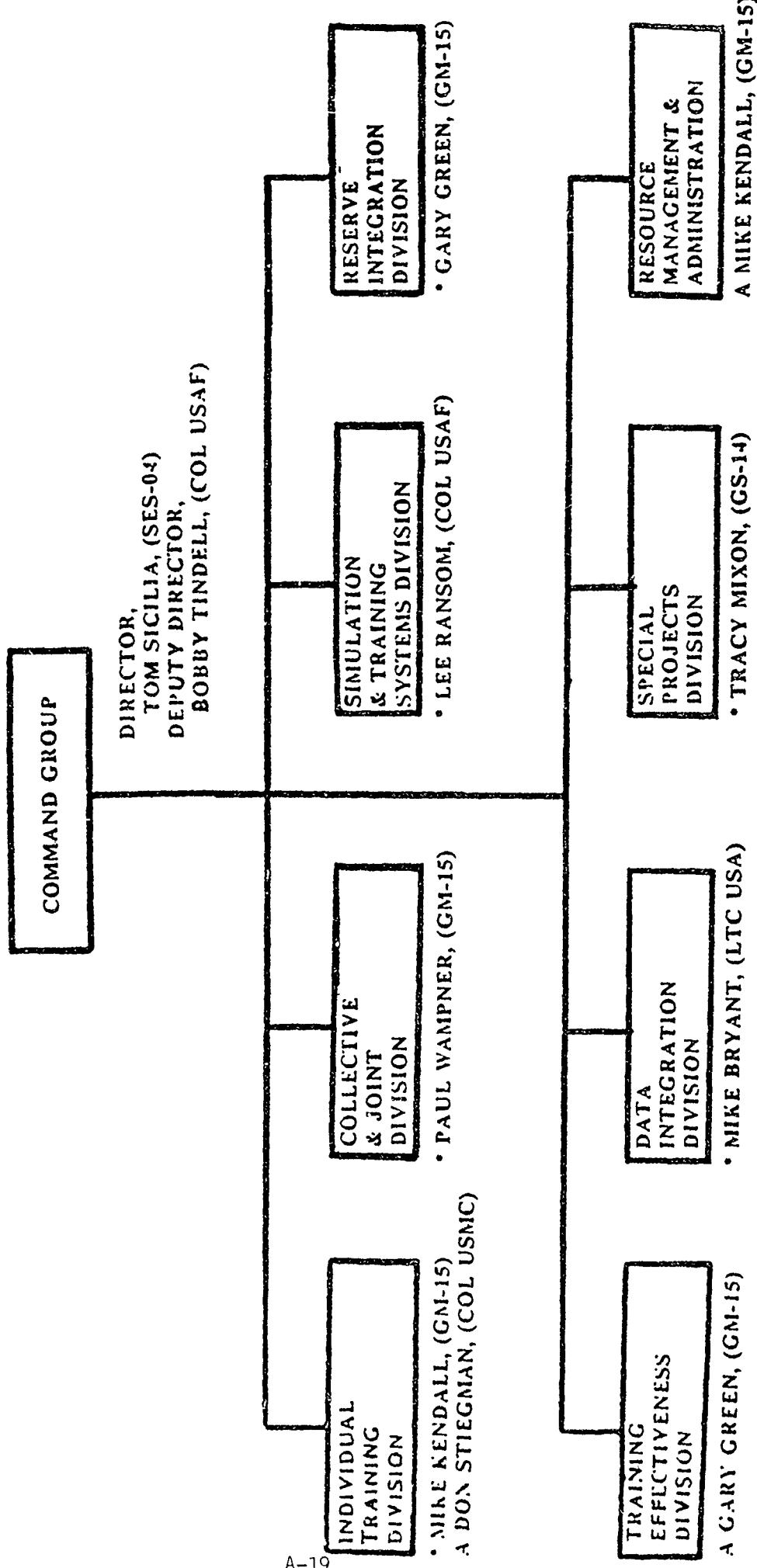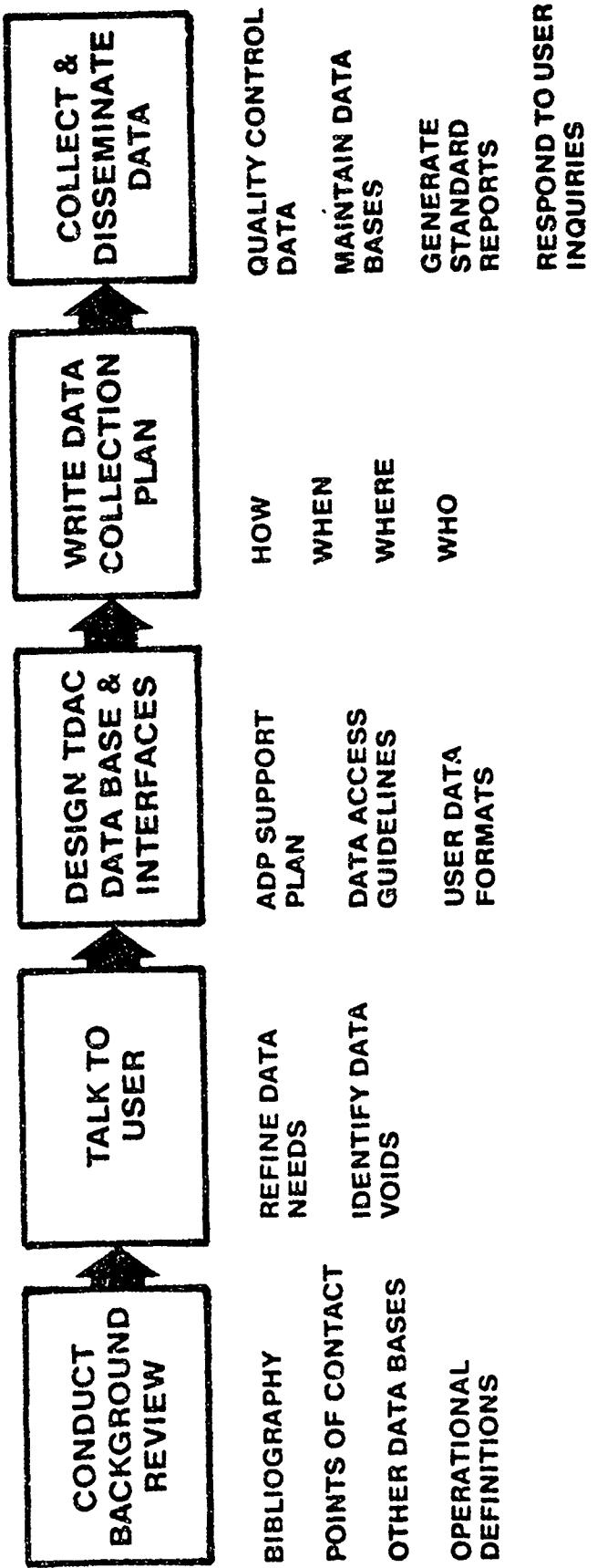
**INDIVIDUAL TRAINING DIVISION**
- MIKE KENDALL, (GM-15)
- ▲ DON STIEGMAN, (COL USMC)

**COLLECTIVE & JOINT DIVISION**
- PAUL WAMPNER, (GM-15)

**SIMULATION & TRAINING SYSTEMS DIVISION**
- LEE RANSOM, (COL USAF)

**RESERVE INTEGRATION DIVISION**
- GARY GREEN, (GM-15)

**TRAINING EFFECTIVENESS DIVISION**
- ▲ GARY GREEN, (GM-15)

**DATA INTEGRATION DIVISION**
- MIKE BRYANT, (LTC USA)

**SPECIAL PROJECTS DIVISION**
- TRACY MIXON, (GS-14)

**RESOURCE MANAGEMENT & ADMINISTRATION**
- ▲ MIKE KENDALL, (GM-15)

• DIVISION DEPUTY DIRECTOR

▲ ACTING DIVISION DEPUTY DIRECTOR

00-GTS-2-86-191

A-19

# GENERAL PLAN OF ACTION

| CONDUCT BACKGROUND REVIEW | TALK TO USER | DESIGN TDAC DATA BASE & INTERFACES | WRITE DATA COLLECTION PLAN | COLLECT & DISSEMINATE DATA |
|---|---|---|---|---|
| BIBLIOGRAPHY | REFINE DATA NEEDS | ADP SUPPORT PLAN | HOW | QUALITY CONTROL DATA |
| POINTS OF CONTACT | IDENTIFY DATA VOIDS | DATA ACCESS GUIDELINES | WHEN | MAINTAIN DATA BASES |
| OTHER DATA BASES | | USER DATA FORMATS | WHERE | GENERATE STANDARD REPORTS |
| OPERATIONAL DEFINITIONS | | | WHO | RESPOND TO USER INQUIRIES |

# TDAC LIAISON WITH
# THE SERVICE LABORATORIES

TDAC WILL

- NOT BECOME AN R&D LAB

- WORK WITH THE SERVICE LABS ON PROJECTS
  CONSISTENT WITH THE TDAC MISSION

COOPERATIVE EFFORTS UNDER WAY

- INDIVIDUAL, UNIT AND SYSTEM PERFORMANCE
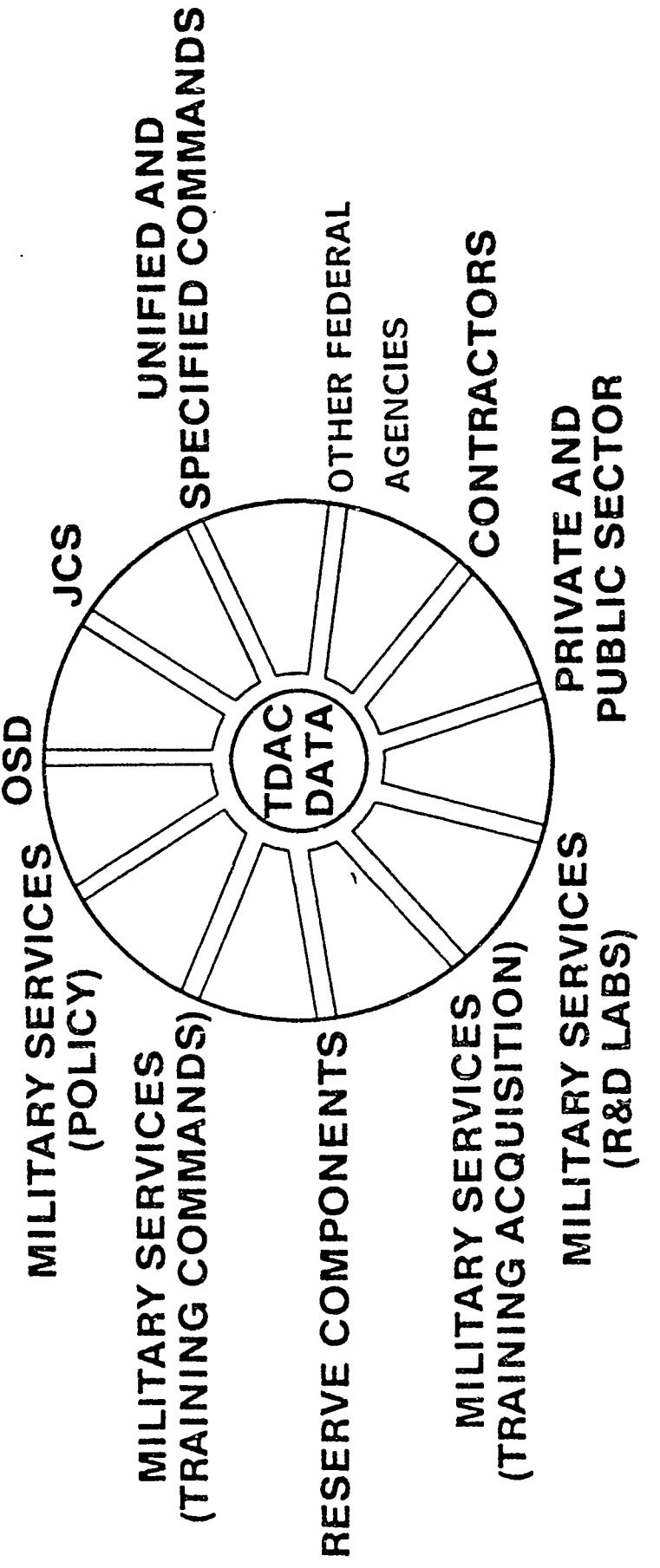
- CBI AND TRAINING TECHNOLOGY TRANSFER

# TDAC - DMDC RELATIONSHIP

- BOTH OPERATE UNDER GUIDANCE OF ASD (FM&P)

- MEMORANDUM OF AGREEMENT

- SHARING RESOURCES/DATA/CAPABILITIES

- SPECIFIC PROJECT

  - PROTOTYPE SSN TRAINING COHORT

- DATA/EQUIPMENT BACK-UP

# THE TDAC USER COMMUNITY

MILITARY SERVICES (POLICY)

OSD

JCS

UNIFIED AND SPECIFIED COMMANDS

MILITARY SERVICES (TRAINING COMMANDS)

TDAC DATA

OTHER FEDERAL AGENCIES

RESERVE COMPONENTS

CONTRACTORS

MILITARY SERVICES (TRAINING ACQUISITION)

PRIVATE AND PUBLIC SECTOR

MILITARY SERVICES (R&D LABS)

00-GTS-0-85-084

A-23

# TDAC MODUS OPERANDI

- ESTABLISH POLICY FOR RELEASE OF DATA TO POTENTIAL USERS

- DEFINE REQUEST PROCEDURES AND SOPs

- PROTECT SERVICE DATA FROM INAPPROPRIATE RELEASE

- INSULATE TDAC FROM OVERSIGHT AGENCY PRESSURES

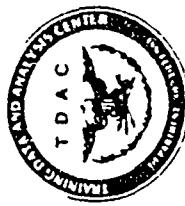# TDAC DATA RELEASE POLICY
## (MODUS OPERANDI)

STATUS

- APPROVED BY TPRC & OSD STEERING COMMITTEE IN DEC 85

- UTILIZED FOR 10 SHORT TERM PRODUCTS IN DEC 85

- TO-BE-DETERMINED: REQUESTS FROM CONTRACTORS WITHOUT SPECIFIC DOD SPONSOR

# DATA BASE CONCEPTS

- TASKING DEVELOPMENT

- DATA BASE DEVELOPMENT

- DATA BASE INTERRELATIONSHIPS

- DATA BASES CURRENTLY UNDER DEVELOPMENT

# DEVELOPING TDAC'S INITIAL TASKS AND PROJECTS

**GIVEN:**

TDAC HAS A VERY BROAD MISSION, CHARTER, AND SMALL STAFF.

**CHALLENGE:**

DEVELOP A FOCUSED APPROACH THAT WOULD PROVIDE RESULTS IN THE MINIMUM TIME.

**SOLUTION:**

INVOLVE THE DOD TRAINING COMMUNITY IN IDENTIFYING THE MOST IMPORTANT AND HIGHEST PRIORITY TRAINING AREAS FOR TDAC'S FOCUS DURING THE FIRST FEW YEARS.

OO-GT8-9-85-078

# INTERIM TASKING DEFINITION PROCESS (FY 85 - FY 89)

- **1ST STEP:** INITIAL INPUT (TASKS FROM 25 SOURCES)    FEB 85

- **2ND STEP:** TASKS GROUPED INTO 16 TOPIC AREAS    FEB 85

- **3RD STEP:** PLAN OF ATTACK BRIEFS    MAR 85

- **4TH STEP:** DETAILED PLAN OF ATTACK    MAY 85

- **5TH STEP:** TDAC INITIAL TASKING APPROVED    JULY 85*

*INCLUDES 47 SPECIFIC TASKS WITHIN THE 16 TOPIC AREAS DEFINED IN STEP 2

00-078-6-85-031A

# AREAS OF FOCUS AND APPROVED MAJOR TOPIC AREAS

● INDIVIDUAL & COLLECTIVE TRAINING DATA

- OCCUPATION BASED COHORT FILE
- SSN BASED COHORT FILES
- RESERVE COMPONENT OCCUPATION BASED FILE

● SIMULATION & TRAINING DEVICES

- SIMULATION AND TRAINING SYSTEMS
- RESERVE COMPONENT EQUIPMENT, FACILITIES & SUPPORT

● COST & PERFORMANCE MEASUREMENT

- INDIVIDUAL & UNIT PERFORMANCE DATA
- TRAINING SYSTEM PERFORMANCE DATA
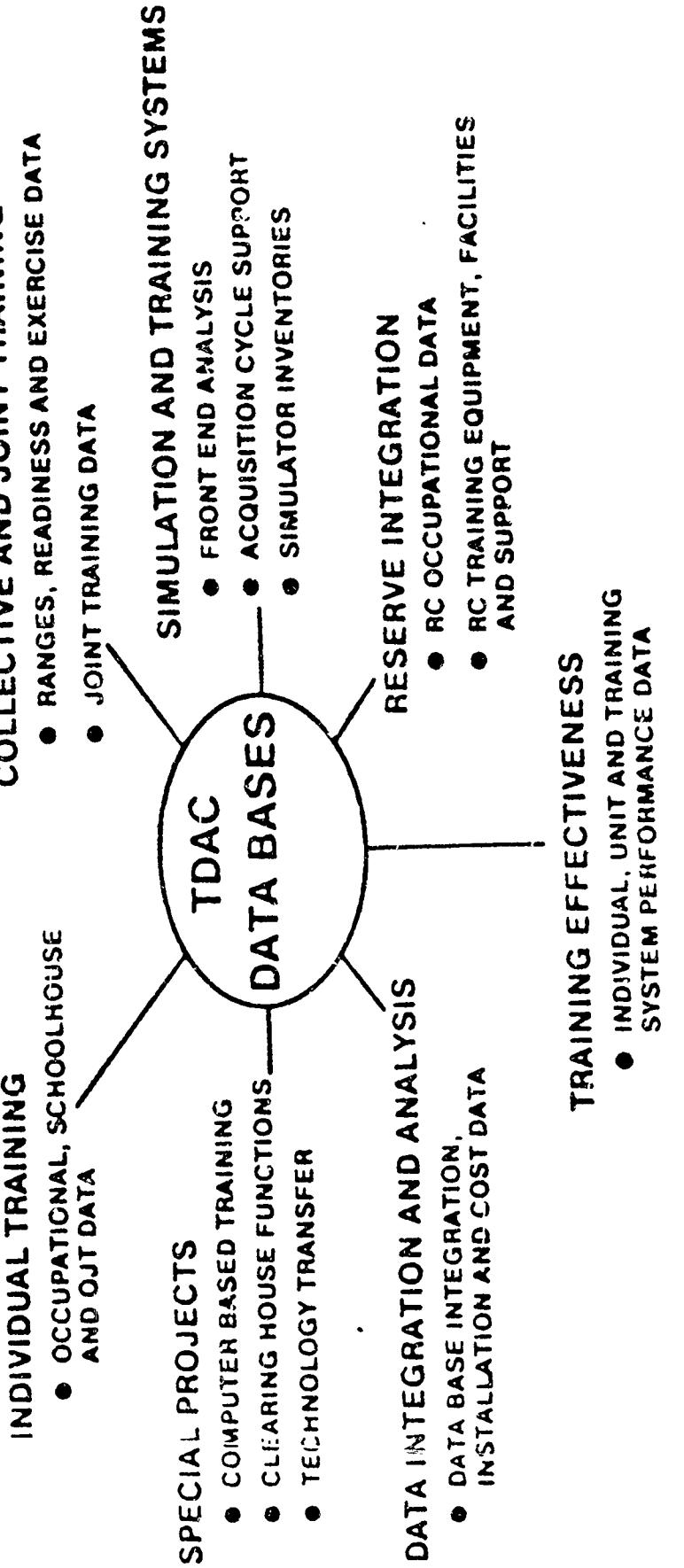- EXERCISES LESSONS LEARNED
- TRAINING COSTS

# MAJOR THRUSTS AND APPROVED TOPIC AREAS

- **RANGES, TRAINING AREAS & INSTALLATIONS**

  - TRAINING RANGES
  - TRAINING BY INSTALLATION DATA BASE

- **TECHNOLOGIES & INFORMATION TRANSFER**

  - COMPUTER BASED INSTRUCTION
  - TRAINING TECHNOLOGY TRANSFER
  - INTEGRATION OF DATA BASES
  - CLEARING HOUSE FUNCTION

● RANGES, TRAINING AREAS & INSTALLATIONS

  − TRAINING RANGES
  − TRAINING BY INSTALLATION DATA BASE

● TECHNOLOGIES & INFORMATION TRANSFER

  − COMPUTER BASED INSTRUCTION
  − TRAINING TECHNOLOGY TRANSFER
  − INTEGRATION OF DATA BASES
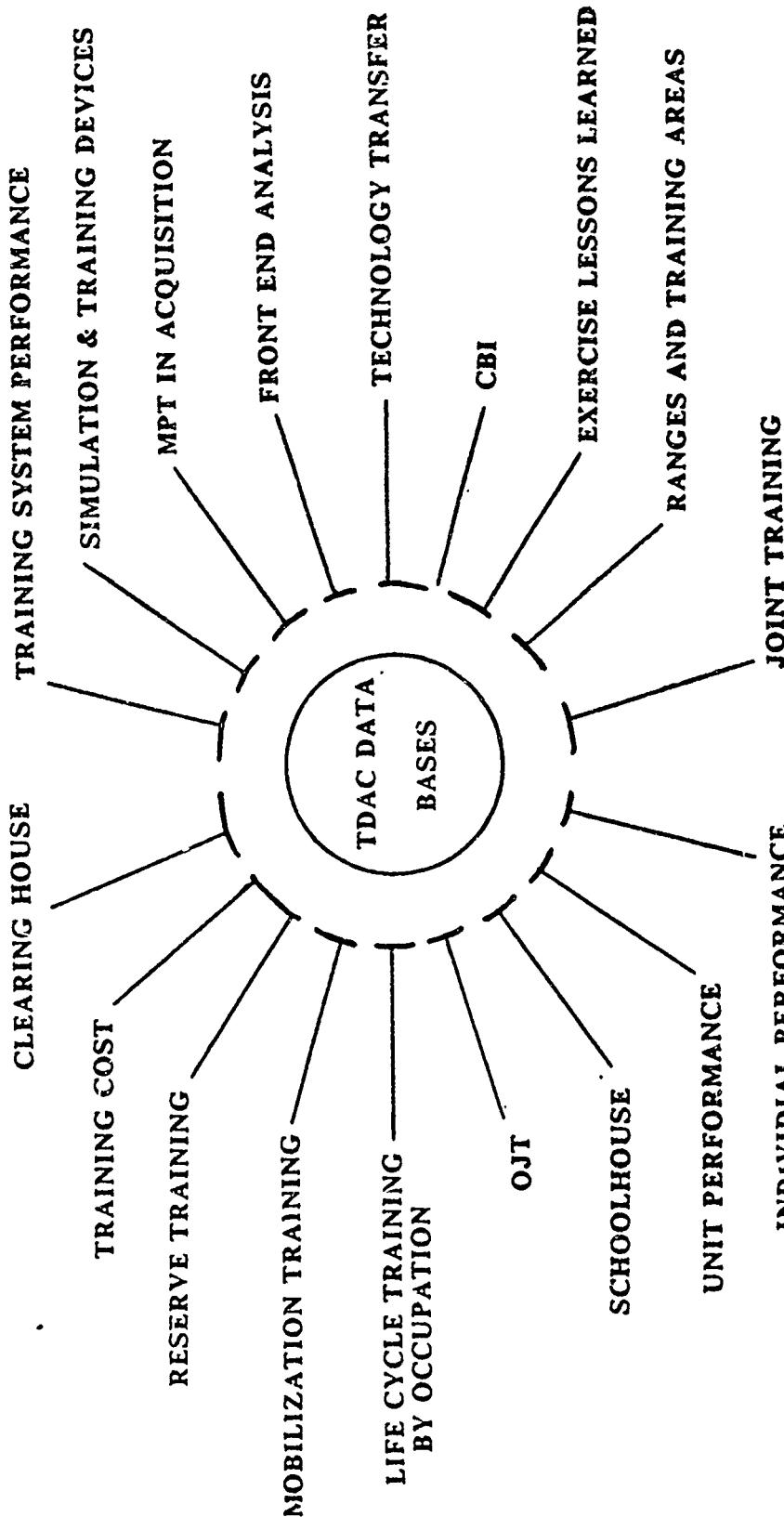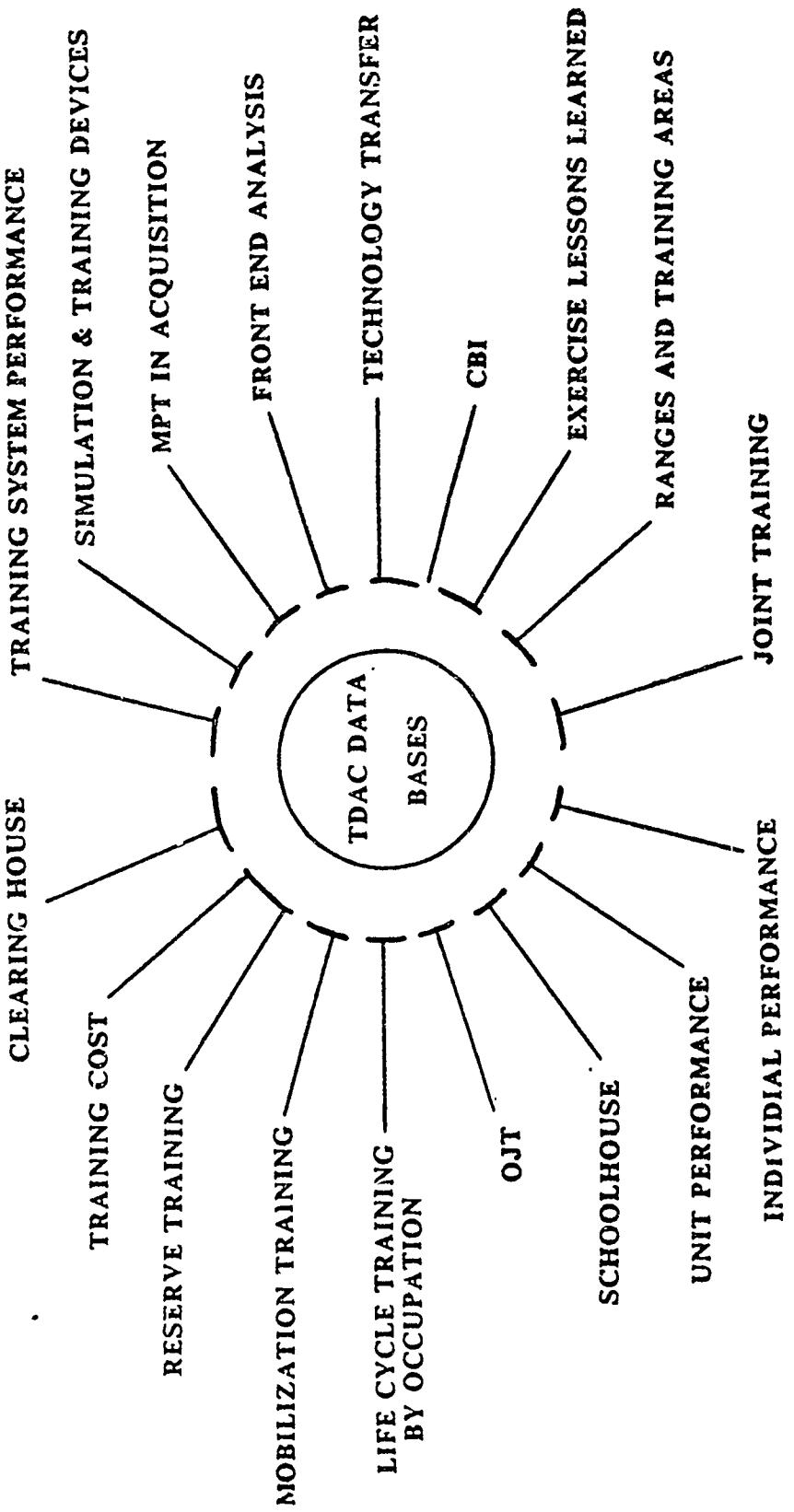  − CLEARING HOUSE FUNCTION

# DIMENSIONS OF TDAC DATA BASES

**TDAC DATA BASES**

**COLLECTIVE AND JOINT TRAINING**
- RANGES, READINESS AND EXERCISE DATA
- JOINT TRAINING DATA

**SIMULATION AND TRAINING SYSTEMS**
- FRONT END ANALYSIS
- ACQUISITION CYCLE SUPPORT
- SIMULATOR INVENTORIES

**RESERVE INTEGRATION**
- RC OCCUPATIONAL DATA
- RC TRAINING EQUIPMENT, FACILITIES AND SUPPORT

**TRAINING EFFECTIVENESS**
- INDIVIDUAL, UNIT AND TRAINING SYSTEM PERFORMANCE DATA

**INDIVIDUAL TRAINING**
- OCCUPATIONAL, SCHOOLHOUSE AND OJT DATA

**SPECIAL PROJECTS**
- COMPUTER BASED TRAINING
- CLEARING HOUSE FUNCTIONS
- TECHNOLOGY TRANSFER

**DATA INTEGRATION AND ANALYSIS**
- DATA BASE INTEGRATION, INSTALLATION AND COST DATA

DO-GTS-85-056A

A-31

# DIMENSIONS OF TRAINING DATA
## TDAC CONCEPT



TDAC DATA BASES

- TRAINING SYSTEM PERFORMANCE
- SIMULATION & TRAINING DEVICES
- MPT IN ACQUISITION
- FRONT END ANALYSIS
- TECHNOLOGY TRANSFER
- CBI
- EXERCISE LESSONS LEARNED
- RANGES AND TRAINING AREAS
- JOINT TRAINING
- INDIVIDIAL PERFORMANCE
- UNIT PERFORMANCE
- SCHOOLHOUSE
- OJT
- LIFE CYCLE TRAINING BY OCCUPATION
- MOBILIZATION TRAINING
- RESERVE TRAINING
- TRAINING COST
- CLEARING HOUSE

TDAC DATA BASES

- TRAINING SYSTEM PERFORMANCE
- SIMULATION & TRAINING DEVICES
- MPT IN ACQUISITION
- FRONT END ANALYSIS
- TECHNOLOGY TRANSFER
- CBI
- EXERCISE LESSONS LEARNED
- RANGES AND TRAINING AREAS
- JOINT TRAINING
- INDIVIDIAL PERFORMANCE
- UNIT PERFORMANCE
- SCHOOLHOUSE
- OJT
- LIFE CYCLE TRAINING BY OCCUPATION
- MOBILIZATION TRAINING
- RESERVE TRAINING
- TRAINING COST
- CLEARING HOUSE

## TDAC'S DATA BASES
## UNDER ACTIVE DEVELOPMENT

- TRAINING TECHNOLOGY TRANSFER PROTOTYPE (CBI SYSTEM DATA)

- RANGES AND TRAINING AREAS

- RC OCCUPATIONAL DATA

- RC BUDGETED TRAINING COST

- RC TRAINING EQUIPMENT AND FACILITIES

- PROTOTYPE SSN DATA FILE

- MACRO LEVEL TRAINING COSTS

- AVIATION SIMULATOR/TRAINING DEVICE INVENTORY

- PROTOTYPE JPM DATA

# SHORT TERM PROJECTS

- USEFUL TOOLS TO SPECIFIED USERS

- BY-PRODUCTS OF LONG TERM EFFORTS

- MILESTONES TO REVIEW TDAC PROGRESS/DIRECTION

00-BT-10-85-108

SHORT TERM PRODUCTS
(DRAFTS DELIVERED:  DEC 85)

1.  TRAINING RANGE PROTOTYPE DATA BASE

2.  SIMULATION MODELS AND WARGAMES DATA FILE

3.  MACRO LEVEL TRAINING COST REPORT

4.  SONAR TRAINING EQUIPMENT INVENTORY

5.  COMPUTER-BASED INSTRUCTION (CBI) TECHNOLOGY DATA BASE

6.  COMPUTER-BASED INSTRUCTION (CBI) RESEARCH AND DEVELOPMENT
    REPORT

7.  TRAINING COMMUNITY NEWSLETTER

8.  DOD TRAINING COMMUNITY DIRECTORY

9.  RESERVE COMPONENT BUDGETED TRAINING COST DATA

10. INTERSERVICE TRAINING ACTIVITY REPORT

00-GTS-2-86-192

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OVERVIEW OF WORKSHOP PANELS

Colonel Donald L. Stiegman

Deputy Director, Individual Training Division

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TRAINING DATA AND ANALYSIS CENTER

TDAC

DEPARTMENT OF DEFENSE
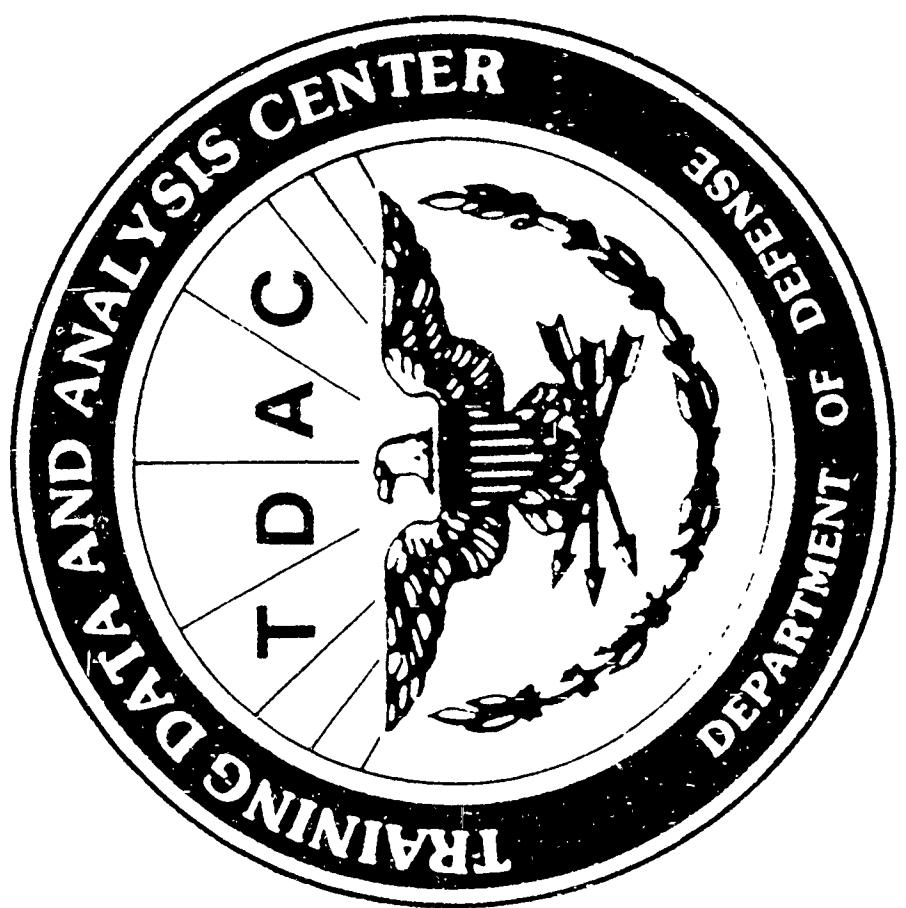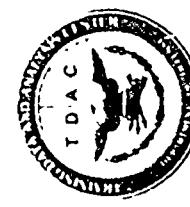
LINKAGE BETWEEN APPROVED AREAS OF FOCUS AND
WORKSHOP PANELS

WORKSHOP PANELS

RESERVE COMPONENT TRAINING

SIMULATION & TRAINING DEVICES

TRAINING COSTS

RANGES & TRAINING AREAS

TRAINING TECHNOLOGY

AREAS OF FOCUS

• INDIVIDUAL & COLLECTIVE
  TRAINING

• SIMULATORS & TRAINING
  DEVICES

• COST & PERFORMANCE
  MEASURES

• RANGES, TRAINING AREAS &
  INSTALLATIONS

• TECHNOLOGY & INFORMATION
  TRANSFER
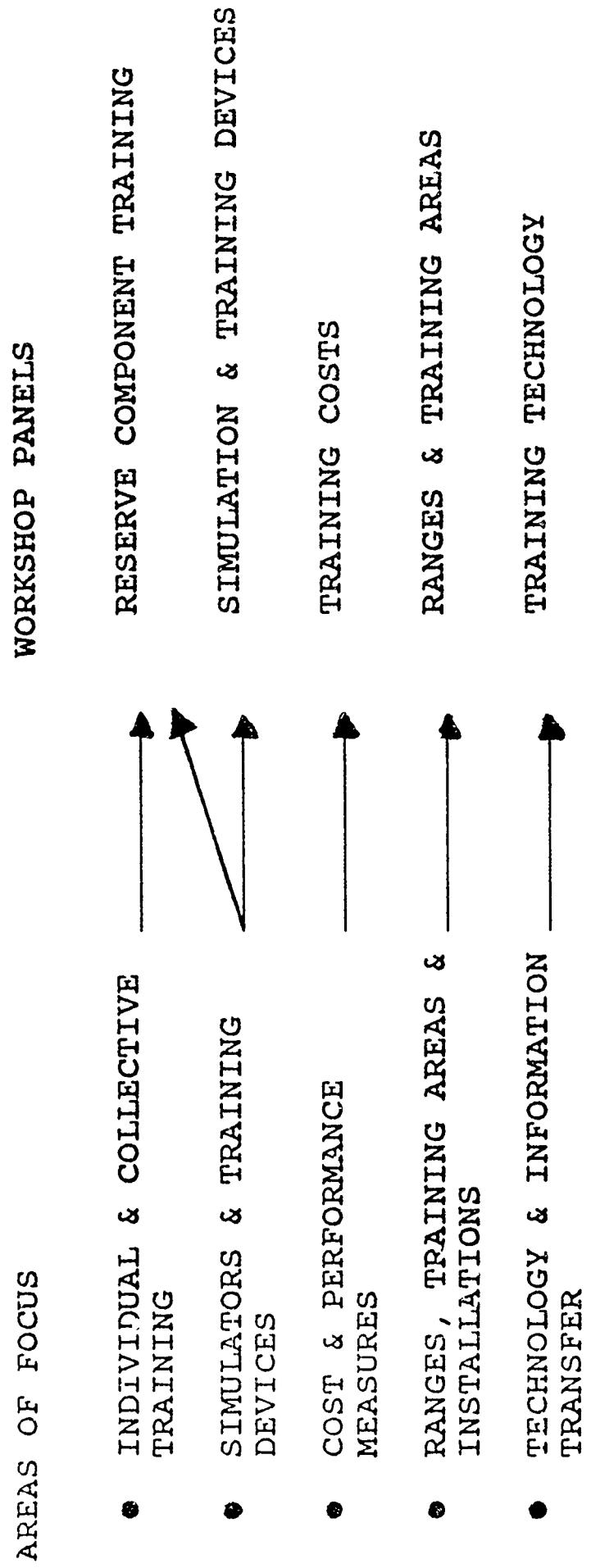
TDAC USER WORKSHOP

PANEL OBJECTIVES

- EXPLORE USER NEEDS, DESIRES AND CONCERNS

- REVIEW TDAC PRODUCTS, PROJECTS AND PLANS

- DISCUSS ISSUES OF GENERAL INTEREST

- DOCUMENT FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

- ESTABLISH A MECHANISM FOR CONTINUED USER INTERACTION

7-SM-03-86-054

A-41

# SIMULATORS AND TRAINING DEVICES

# SIMULATORS AND TRAINING DEVICES

## TOPICS TO BE ADDRESSED

● USER DATA REQUIREMENTS

● COST FACTORS

● KEY DATA ELEMENTS (FOR LINKING)

    – COURSES
    – SKILL CODES
    – TECHNOLOGY TRANSFER

# SIMULATORS AND TRAINING DEVICES

## INITIATIVES

- EQUIPMENT INVENTORY
- FRONT END ANALYSIS DATA SUPPORT

## PANEL ACTIVITIES

- PRESENTATIONS
- DISCUSSION/BRAINSTORMING
- REVIEW DATA ELEMENTS
- COURSE CORRECTIONS FOR TDAC

# RESERVE COMPONENT TRAINING

RESERVE COMPONENT TRAINING

WHY THE DoD FOCUS ON RESERVE COMPONENTS?

● OVER 50% OF TOTAL FORCE IS NOW IN RESERVE COMPONENTS WHERE
  TRAINING ENVIRONMENT IS TOUGHER THAN ACTIVE

  - TRAINING TIME ABOUT 1/6TH ACTIVE TIME
  - UNITS OFTEN SPLIT, DISPERSED
  - TRAINING EQUIPMENT AND FACILITIES OFTEN LIMITED

● BUT

  - PERFORMANCE REQUIREMENTS IN WARTIME SAME FOR ACTIVE AND
    RESERVE COMPONENTS

04-GAG-03-86-001

A-46

RESERVE COMPONENT TRAINING

WHY AN RC WORKSHOP?

● OF 12 INITIAL TDAC TASKS SPECIFIC TO RESERVE COMPONENTS
  NONE WERE FROM A RESERVE COMPONENT

  - 11 FROM OSD OR UNIFIED COMMANDS
  - 1 FROM A SERVICE

● RESERVE COMPONENTS HAVE EXPRESSED INTEREST IN TDAC PROJECTS
  BUT HAVE LITTLE INFORMATION

● WORKSHOP INTENDED TO

  - INFORM RC TRAINERS OF TDAC PROJECTS
  - INVOLVE RC TRAINERS IN IMPROVING EXISTING PROJECTS OR
    DESIGNING NEW ONES

04-GAG-03-86-002

A-47

# RESERVE COMPONENT TRAINING

TDAC INITIATIVES IN RESPONSE TO INITIAL TASKING

- RC OCCUPATIONAL DATA PROJECT

  - RC UNIQUE DATA TO COMPLIMENT OCCUPATIONAL COHORT FILE

- RC TRAINING RESOURCES PROJECT

  - TRAINING EQUIPMENT AND FACILITIES AVAILABLE TO RC

- RC TRAINING COST PROJECT

  - BUDGETED COST OF RESERVE COMPONENT TRAINING

- RC TECHNOLOGY TRANSFER PROJECT

  - SUCCESSFUL TRAINING TECHNOLOGIES TRANSFERABLE AC TO RC OR BETWEEN RC'S

04-GAG-03-86-003

A-48

# RESERVE COMPONENT TRAINING

PANEL ACTIVITIES

● REVIEW OF PROJECTS WITH POTENTIAL APPLICATION IN RC

- MACRO AND RC TRAINING COST PROJECTS
- OCCUPATIONAL DATA BASE PROJECTS
- TRAINING SPACE PROJECT
- RC TRAINING EQUIPMENT AND FACILITIES PROJECTS
- TECHNOLOGY TRANSFER
  -- BRIEFS ON ARMY, AIR FORCE AND TDAC INITIATIVES

● BRAINSTORM PROJECTS AND FUTURE DIRECTION OF RC EFFORT

04-GAG-03-86-004

# RESERVE COMPONENT TRAINING

DESIRED PANEL OUTCOME

- RC TRAINING POLICY MANAGERS INFORMED OF TDAC PROJECTS

- TDAC AWARENESS OF PROJECT REVISIONS THAT COULD LEAD TO BROADER RC APPLICATIONS

- IDENTIFICATION OF ADDITIONAL PROJECTS OR IMPROVED DIRECTIONS FOR TDAC RC EFFORTS

04-GAG-03-86-005

A-50

# TRAINING TECHNOLOGY

# TRAINING TECHNOLOGY

TDAC INITIATIVES

- DEVELOPMENT OF A TRAINING TECHNOLOGY DATA BASE

- HQ AF ATC IS THE SPONSOR

- EXTENSIVE END USER INVOLVEMENT IS REQUIRED

7-JY-03-86-048

# TRAINING TECHNOLOGY

STATUS

- ADVANCED TRAINING TECHNOLOGY DATABASE (ATTD) PROTOTYPE COMPLETE

- COMPUTER BASED INSTRUCTION DEFINITION STUDY COMPLETE

- FORUM NEEDED FOR DISCUSSION OF SERVICE TECHNOLOGY TRANSFER INITIATIVES

- FUTURE TDAC EFFORTS IN THIS AREA DEPEND ON USER INPUT TO ATTD STRUCTURE

7-JY-03-86-049

# TRAINING TECHNOLOGY

ISSUES

- TRAINING TECHNOLOGY INFORMATION COLLECTION, STRUCTURE AND DISTRIBUTION

- COMMON (JOINT SERVICE) TRAINING TECHNOLOGY APPLICATIONS

- TRAINING TECHNOLOGY DATA ELEMENTS AND WHAT FORMATS

7-JY-03-86-050

# TRAINING TECHNOLOGY

PANEL ACTIVITIES

● PRESENTATIONS ABOUT TECHNOLOGY TRANSFER BY SERVICES AND TDAC

● PRESENTATION ABOUT TECHNOLOGY - EIDS SYSTEM

● DEMONSTRATION - INTERACTIVE VIDEODISC (HOW TO MAKE A VIDEODISC)

● DISCUSSIONS ABOUT TECHNOLOGY TRANSFER

7-JY-03-86-051

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# TRAINING TECHNOLOGY
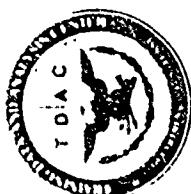
PANEL ACTIVITIES CONTINUED

- CBI PRESENTATIONS BY SERVICES AND TDAC

- REVIEW DATA ELEMENTS & STRUCTURE FOR CBI PRODUCTS

- IDENTIFICATION OF HIGH INTEREST OR CRITICAL TRAINING ISSUES THAT TDAC SHOULD/COULD ADDRESS

7-JY-03-86-052

A-56

# TRAINING TECHNOLOGY

DESIRED PANEL OUTPUT

- DIRECTION FOR DEVELOPMENT OF A TRAINING TECHNOLOGY DATA BASE

- IDENTIFY SOURCES OF INFORMATION ABOUT TECHNOLOGY TRANSFER PROGRAM

- END USER INVOLVEMENT WILL ENSURE PRODUCT UTILITY

- JOINT SERVICE ISSUES IDENTIFIED

7-JY-03-86-053

A-57

# RANGES AND TRAINING AREAS

# RANGES AND TRAINING AREAS

BACKGROUND:

PROTOTYPE DATA BASE FOR SMALL ARMS RANGES HAS BEEN DEVELOPED

- TDAC RECEIVED MULTIPLE REQUESTS TO DEVELOP A RANGES DATA BASE

- USER REVIEW AND INPUT ON THE DATA BASE DEVELOPMENT PLANS IS NOW TIMELY AND APPROPRIATE

A-59

# RANGES AND TRAINING AREAS

TDAC INITIATIVES:

● COMPILING A DATA BASE OF RANGES & TRAINING AREAS BEGINNING WITH SMALL ARMS RANGES IN THE NORTHEASTERN U.S.

● IN RESPONSE TO A QUESTION FROM RESERVE AFFAIRS. "WHERE CAN THE GUARD & RESERVE UNITS CONDUCT ANNUAL QUALIFICATION FIRING?"

● HAVING DESIGNED A PROTOTYPE DATA BASE ON SMALL ARMS RANGES, USER INPUTS ARE NEEDED TO VALIDATE AND UPDATE THE DATA, IMPROVE THE UTILITY OF THE DATA ELEMENTS & PROVIDE DATA FOR EXPANSION TO OTHER AREAS.

2-PW-3-86-013

A-60

# RANGES AND TRAINING AREAS

ISSUES:

- DOES THE DATA BASE SATISFY USER NEEDS?

- ARE THE DATA ELEMENTS SUFFICIENT & APPROPRIATE?

- WHAT DATA AREAS ARE OF MOST VALUE?

- HOW CAN DATA BEST BE VALIDATED AND KEPT CURRENT?

# RANGES AND TRAINING AREAS

PANEL ACTIVITIES WILL INCLUDE:

- PRESENTATIONS ON THE TDAC RANGES DATA BASE AND THE U.S. ARMY DART DATA BASE

- DEMONSTRATIONS OF THE TDAC RANGES DATA BASE

- REVIEW OF THE DATA DICTIONARY

- DISCUSSION OF USER REQUIREMENTS & PRIORITIES

2-PW-3-86-014

# RANGES AND TRAINING AREAS
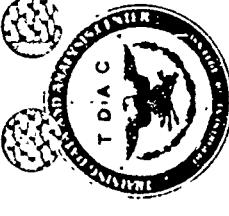
DESIRED PANEL OUTPUT:

- USER AGREEMENT ON THE CONTENTS OF AND PRIORITY OF EXPANSION OF THE DATA BASE

- USER FAMILIARIZATION WITH THE CONTENTS AND UTILITY OF THE RANGES DATA BASE

# TRAINING COSTS

# TRAINING COSTS

THREE LEVELS OF TRAINING COST DATA:

- FYDP/BUDGET MACRO LEVEL TRAINING COST DATA

- INDIVIDUAL/COLLECTIVE LEVEL TRAINING COST DATA

- TRAINING SYSTEM LEVEL TRAINING COST DATA

# TRAINING COSTS

CURRENT TDAC INITIATIVES:

- COMPILING A LONGITUDINAL DATA BASE CONTAINING MACRO LEVEL FUNDING DATA BY TRAINING CATEGORY, MFP, PE AND RESOURCE

- DEVELOPING AN OCCUPATIONAL RELATED LONGITUDINAL DATA BASE

- DEVELOPING A GENERALIZED COST ELEMENT STRUCTURE FOR TRAINING SYSTEMS LIFE CYCLE COST

6-AB-03-86-014

TRAINING COSTS

MAJOR ISSUES:

- CURRENT TDAC INITIATIVES TO SATISFY USER NEEDS

- CLARIFICATION ON INITIAL USER REQUESTS

- USER REQUIREMENTS FOR FUTURE TDAC EFFORTS

6-AB-03-86-013

# TRAINING COSTS

PANEL ACTIVITIES:

- OVERVIEW OF TDAC'S CURRENT INITIATIVES

- PRESENTATION OF PROTOTYPE FYDP/BUDGET MACRO LEVEL TRAINING COST DATA BASE

- DISCUSSION OF USER REQUIREMENTS AND PRIORITIES FOR CONSIDERATION OF POSSIBLE FUTURE TDAC EFFORTS

- DISCUSSION OF IDEA FOR A STANDING TDAC USER GROUP ON TRAINING COST ISSUES

6-AB-03-86-015

# TRAINING COSTS

DESIRED PANEL OUTPUT:

- USER FAMILIARIZATION WITH TDAC'S CURRENT INITIATIVES

- USER INPUTS ON REQUIREMENTS AND PRIORITIES FOR FUTURE TDAC EFFORTS.

- USER RECOMMENDATIONS ON PERMANENT COST ADVISORY PANEL

6-AB-03-86-016

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ATTACHMENT B

TDAC DIVISION RESPONSIBILITIES

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## TDAC DIVISION RESPONSIBILITIES

### Individual Training Division

The Individual Training Division collects, consolidates and stores data related to courses conducted by institutions whose predominant mission is the training of individuals. The division charter also includes the on-the-job training (OJT) which supplements or substitutes for all or part of formal course training. Two major data bases are being developed; the first of which is an occupation-based cohort data file. This file contains information on such areas as OJT, DoD formal courses, training manpower/loads, demographics, training costs, job/task analysis, training effectiveness and private sector schools. This data base will allow users to analyze occupation-based training issues, identify cause and effect relationships and ultimately improve training effectiveness. The second data base is the Social Security Number (SSN) based cohort data file. This file will track individuals' training experiences including courses, demographics, assignments, OJT experience, training performance, follow-on training and so forth.

The division also explores existing civilian work force data bases, assesses the data quality and stores the information for analytical purposes. In addition, it assists OASD (FM&P) in the compilation of the Military Manpower Training Report which is submitted annually to the Congress.

### Collective and Joint Training Division

Collective training is the training of operational units required to develop and maintain cohesive and capable teams. Collective training refers to training of groups of individuals at crew/squad/section level up to fleets, field armies and joint and combined commands. Joint training is defined as that involving two or more services. Collective and joint training prepares units for likely wartime missions and maintains them in a prescribed state of training readiness.

The Collective and Joint Training Division collects data needed to improve the quality of: collective training strategies, methods of collective training, ranges and other unit training facilities, simulation for wargaming and other unit training purposes, measures of training readiness and joint training initiatives, systems and issues. In carrying out this mission, the division devised methods for retrieval and maintenance of data and information on collective and joint training and collects, stores and analyzes these data.

## Simulation/Training Systems Division

The Simulation/Training Systems Division collects technical data on fielded, and soon to be fielded training systems to improve Manpower, Personnel, & Training (MPT) considerations in the acquisition cycle. Regarding the Simulation/Training System inventory, the initial effort is to collect significant data on fielded aviation training devices. In addition to generating the initial increment of the inventory data base this effort supports the Air Force Advanced Tactical Fighter (ATF) program. In a concurrent effort, selected data are being collected on major weapon system training devices in acquisition. These two efforts will be incrementally expanded to include all fielded training devices and those in acquisition. Regarding the MPT considerations, the division is inspecting front-end analysis as conducted by the services in terms of discrete events, data requirements, and data sources. A prototype data base is being developed which will facilitate media selection, device design, and training system integration. A MPT "Footprint" Study has also been initiated which will produce a methodology for identification of existing MPT resources to support analysis of new weapon system training requirements.

## Training Effectiveness Division

The Training Effectiveness Division supports the development and validation of new job performance measurement data and technologies being advanced by the military Services. On behalf of OSD, the Division works directly with the Services' research and development laboratories, as well as policy and operational agencies, to ensure that valid, reliable and useful performance data is collected and made available to meet decision-making needs within the manpower, personnel, training, logistics, acquisition and operational communities.

The Division focuses its efforts on individual and unit performance data collected by the Services. Simultaneously, it supports the efforts of sister TDAC Divisions responsible for gathering training cost and simulator/training device data. In doing so, the Division is responsible for integrating these data with state-of-the-art analytical techniques and conducting training effectiveness and cost tradeoff evaluations, which are the recognized decision-making tools of training managers and weapons systems acquisition project officers.

In carrying out these functions, the Division supports Service efforts to train personnel; develop affordable, operable and maintainable weapon systems; and enhance force combat readiness.

## Special Projects Division

Special Projects Division collects data on existing training technologies in use by the Services; "emerging" training technologies; and, methods and techniques for analyzing, selecting, developing and implementing training/instructional systems. These data (such as costs, lessons-learned, skills taught, hardware/software sources, applications) are made available to training system developers, acquisition managers and other defense training community personnel to increase the use of proven training technologies while reducing the incidence of unnecessary new development or inappropriate applications.

An initial focus of the division is on Computer-Based Instruction (CBI) technology. Once a complete CBI data base has been assembled, it will be expanded to include other training technologies in use or development by the Services. This data base will serve the needs of the entire DoD training community.

An associated responsibility of the division is to serve as a clearinghouse for informaton and data of general interest to the DoD and industry training communities. Data and information on conferences meetings and research & development projects will be collected and disseminated. Special Projects Division is the primary TDAC interface for the exchange of information of mutual interest to the DoD and industry training communities.

## Reserve Integration Division

The Reserve Integration Division is the primary focus for reserve component training issues in TDAC. The division will collect, store, maintain and analyze training data specific to the reserve components. Major areas addressed by the division will include transfer and transition of training technologies from the active to reserve or between reserve components. Other areas for which the division will collect data are training equipment, training facilities and other training support needs in the reserve components, training activity during both annual training and inactive duty training and budget level cost of reserve component training. The division will also collect and maintain relevant data on mobilization training issues.

The division will work with other TDAC divisions to insure that reserve component considerations are addressed in the functional projects of those divisions. For example, reserve unique occupational data will be developed by Reserve Integration Division and appended to a more comprehensive occupational data base being constructed by Individual Training Division. Similarly, individual training histories of reserve component members will be collected by the division and added to a social security account numbered file in Individual Training Division. Training range and training device information will be addressed in the same manner.

B-5

## Data Integration & Analysis Division

The Data Integration and Analysis Division is the TDAC focal point for interface with internal TDAC data bases and those not maintained by TDAC. While the TDAC data bases address specific functional training areas and issues, they also allow policy managers as well as those in the research and development community to include quantitative training data and analysis in broader management and policy actions. The division insures that TDAC data can be matched, integrated and linked with appropriate data from the Defense Manpower Data Center, other manpower data sources and a variety of other data bases that maintain system reliability and maintainability information. These linkages can be used in two ways. First, they allow the training aspect of broader issues to be quantified and addressed in analytical manner. Second, they allow the training community to consider and incorporate non-training information into training analyses.

This division is also the single TDAC element responsible for the integration, analysis and reporting of training cost information. The division develops, maintains and continuously refines training cost methods, measurements and models and has primary responsibility for the preparation and dissemination of reports and analyses concerning training cost data.

ATTACHMENT C

WORKSHOP AGENDA

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AGENDA

TDAC USER WORKSHOP

MARCH 19 & 20, 1986

**March 19**

| 0800-0900 | Check-in & Danish | Student Center Auditorium |
| 0900-0920 | Welcome | Dr. Sicilia |
| 0920-0950 | TDAC Overview | Col. Tindell |
| 0950-1020 | Open Discussion | |
| 1020-1045 | Break | Student Center Auditorium |
| 1045-1130 | Panel Session Oveview | Col. Stiegman |
| 1130-1145 | Administrative Announcements | Mr. Merriman |
| 1200-1330 | Lunch | University Dining Room |
| 1330-1500 | Convene Panel Sessions | Panel Chairs |
| 1500-1515 | Break | Student Center Auditorium |
| 1515-1630 | Continue Panel Sessions | Panel Chairs |
| 1630-1800 | Reception | President's Dining Room |

**March 20**

| 0800-0830 | Coffee and Danish | Student Center Auditorium |
| 0830-1000 | Continue Panel Sessions | Panel Chairs |
| 1000-1015 | Break | Student Center Auditorium |
| 1015-1200 | Continue Panel Sessions | Panel Chairs |
| 1200-1330 | Lunch | Universirty Dining Room |
| 1330-1500 | Continue Panel Sessions | Panel Chairs |
| 1500-1515 | Break | Student Center Auditorium |
| 1515-1630 | Panel Session Wrap-Up | Panel Chairs |
| 1630 | Workshop Adjourns | |

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